VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 1 GENERAL

Section 1 Safety Assurance System

10-1-1-1 GENERAL. This chapter explains the policy, concepts, principles, roles and responsibilities, acronyms, and definitions for the Safety Assurance System (SAS).

A. Purpose. The purpose of this section is to provide an overview of SAS, including statutory background, key concepts, and principles.

B. Scope. This section applies to all SAS users.

10-1-1-3 RESERVED.

10-1-1-5 BACKGROUND.

A. Statutory Authority. Title 49 of the United States Code (49 U.S.C.) and Title 14 of the Code of Federal Regulations (14 CFR) provide the statutory and regulatory authority for SAS, respectively. Title 49 U.S.C. is broad in scope and contains the codified provisions of the Federal Aviation Act of 1958 (FA Act), which prescribes the powers and authorities of the Federal Aviation Administration (FAA). Title 14 CFR is prescriptive in nature and contains specific requirements to obtain a certificate holder operating or air agency certificate and standards for conducting related operations. SAS is not a separate safety standard and does not impose additional requirements on certificate holders. The SAS policy and procedures provide aviation safety inspectors (ASI) with standardized protocols to evaluate certificate holder programs required by regulations to be approved or accepted. The following requirements in 49 U.S.C. Subtitle VII, Chapter 447, Safety Regulation, are applicable to SAS:

1) Title 49 U.S.C. § 44702, Issuance of Certificates. "When issuing a certificate under this chapter, the Administrator shall consider the duty of an air carrier to provide service with the highest possible degree of safety in the public interest."

2) Title 49 U.S.C. § 44705, Air Carrier Operating Certificates. "The Administrator of the Federal Aviation Administration shall issue an air carrier operating certificate to a person desiring to operate as an air carrier when the Administrator finds, after investigation, that the person properly and adequately is equipped and able to operate safely under this part and regulations and standards prescribed under this part."

3) Title 49 U.S.C. § 44707, Examining and Rating Air Agencies. The Administrator is authorized to provide for the examination and rating of air agencies, such as civilian flight schools, repair stations, and other air agencies. The Administrator is also authorized to issue certificates for these flight schools, repair stations, and air agencies.

B. Policy Statement of the FAA as it Pertains to Promoting Aviation Safety for Certificate Holders. SAS is a system safety approach to oversight based on FAA policy. The FAA follows regulatory policy, which recognizes the obligation of the certificate holder to

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maintain the highest possible degree of safety. SAS implements our policy by providing safety controls (i.e., regulations and application) of business organizations and individuals who fall under FAA regulations. Under SAS, our primary responsibilities are to:

1) Verify an applicant can operate safely and comply with the regulations and standards before issuing a certificate and approving or accepting programs.

2) Conduct periodic reviews to verify that a certificate holder continues to meet regulatory requirements when the environment changes.

3) Validate the performance of a certificate holder's approved and accepted programs for the purpose of Continued Operational Safety (COS).

4) Identify regulatory noncompliance or safety issues and correct them as effectively, quickly, and efficiently as possible.

5) Use the most effective means to return an individual or entity that holds an FAA certificate, approval, authorization, or license to full compliance and to prevent recurrence.

C. SAS Concepts and Principles.

1) Definitions of Safety and Risk. Safety is the state in which the risk of harm to people or property damage is reduced to and maintained at or below an acceptable level through a continuing process of hazard identification and risk management (RM). Risk is the combination of predicted severity and the likelihood of the potential effect of a hazard. In this context, an air carrier's duty is to provide service with the highest degree of safety in the public interest, which means that the air carrier must identify hazards in its operating environment and manage associated risks. Similarly, an air carrier's ability to manage risk is an important part of the FAA's determination to ensure that the air carrier is equipped to operate safely under 49 U.S.C. and the regulations and standards prescribed by 14 CFR.

2) System Safety. The goal of system safety is to optimize safety by the identification of hazards within an environment and to eliminate or control their associated risk. We do this by performing Design Assessments (DA) and Performance Assessments (PA) based on system safety principles. Certificate holders fulfill their responsibilities by designing operating systems that manage hazard-related risks and by providing service with the highest degree of safety in the public interest. These concepts are fundamental to SAS. The FAA uses a risk-based, data-supported system approach to conduct oversight that validates the certificate holder's ability to manage risk and to achieve safety objectives.

3) Safety Attributes. The key to safety is managing safety-critical processes. This is a responsibility of a certificate holder in meeting the regulatory obligations. Every Data Collection Tool (DCT) question is based on one of the Safety Attributes listed in Table 10-1-1A, Safety Attributes. Safety Attributes provide a foundation for the DCTs so that principal inspectors (PI) can make informed decisions about the certificate holder's operating systems (1) before approving or accepting them when required to do so by the regulations, and (2) during recurring PAs.

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4) Hazard. A hazard is a condition that could foreseeably cause or contribute to an aircraft accident, as defined in Title 49 of the Code of Federal Regulations (49 CFR) part 830, § 830.2.

Table 10-1-1A. Safety Attributes

Safety Attributes	Description
Responsibility	A clearly identified person who is responsible for ensuring financial and human resources to ensure the safety and quality performance of a process.
Authority	A clearly identifiable, qualified, and knowledgeable person who has authority to effectively plan, direct, and control resources; change procedures; and make key determinations, including safety risk acceptance decisions.
Procedures	Methods or practices including checks and restraints that are written or unwritten and regulatory or nonregulatory, designed into a process that a certificate holder/applicant uses to accomplish a desired result. "Unwritten methods" refer to certificate holders/applicants that are not required by regulation to have documented procedures.
Controls	Developing and maintaining the need for, and adequacy of, new or revised risk controls into a process to ensure mitigation of unacceptable risk.
Process Measurement	Monitoring and measuring the outputs and safety performance of a process and identifying problems, or potential problems, in order to take corrective action.
Interfaces	Interactions between processes that must be managed in order to ensure desired outcomes.
Safety Ownership	The measure of understanding an individual has of how his or her performance of safety-related duties contributes to the safety performance of the element.

D. Focus on a Certificate Holder's Organization and Processes. The FAA issues certificates, monitors compliance, investigates noncompliance, administers sanctions, and focuses on a certificate holder's organization and process management. We monitor outputs and outcomes, but place emphasis on the certificate holder's ability to develop a safe process and to correct deficiencies. DAs supply objective evidence that a certificate holder/applicant's design processes are either adequate or inadequate. PAs supply objective evidence of either the adequacy or inadequacy of the output of the certificate holder/applicant's design.

E. Open System Perspective. A successful open system adapts to the needs of the environment and its resources. Safe operation in the aviation environment requires constant adaptation. Certificate holders must provide systems that defend against the hazards in the operating environments, including adapting to changes. DCTs are used to collect information on risks and on the certificate holder's ability to control them.

F. Data Sharing. The FAA is responsible for reaching an assessment of a certificate holder's or applicant's qualification to hold an operating certificate and to comply with regulations and standards. A qualified ASI may accomplish and validate a DA with information provided by the certificate holder, applicant, or third party, such as the Department of Defense (DOD) or Department of Transportation (DOT), or any of the authorities associated with a

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Bilateral Aviation Safety Agreement (BASA). Data sharing and open communication optimize the oversight system and leverage resources to advance safety.

G. Primary Stakeholder and Beneficiary. The U.S. public is the primary stakeholder and beneficiary of SAS. The FAA carries out the safety mission required by statute in the interest of the public. ASIs are responsible for determining, on behalf of the public, that certificate holders can provide service with the highest possible degree of safety.

H. Freedom of Information Act (FOIA). Records are processed under FOIA in accordance with DOT and Government-wide directives and guidance. FAA Order 1270.1, Freedom of Information Act Program (FOIA), provides guidance that governs processing requests for FAA records under FOIA.

I. Security Risks. Security is an important feature of the SAS automation. If a SAS user detects a security breach or there is an indication of a security risk, the SAS user should immediately notify the office SAS Security Auditor. Some examples of a security breach or a risk include:

1) Unauthorized or unintended activity or misuse by authorized database users, database administrators, or network/systems managers, or by unauthorized users or hackers (e.g., inappropriate access to sensitive data, metadata, or functions within databases; or inappropriate changes to the database programs, structures, or security configurations).

2) Malware infections causing incidents such as unauthorized access, leakage, or disclosure of personal or proprietary data; deletion of, or damage to, the data or programs; interruption or denial of authorized access to the database; attacks on other systems; and the unanticipated failure of database services.

3) Overloads, performance constraints, and capacity issues resulting in the inability of authorized users to use databases as intended.

4) Design flaws and programming bugs in databases and the associated programs and systems, creating various security vulnerabilities (e.g., unauthorized privilege escalation), data loss/corruption, performance degradation, etc.

5) Data corruption and/or loss caused by the entry of invalid data or commands, mistakes in database or system administration processes, sabotage/criminal damage, etc.

J. Master List of Functions (MLF) Element and Program Tracking and Reporting Subsystem (PTRS). For data mining and reporting, it is highly recommended to record the related MLF element in the "Local Use" field for the PTRS items listed below (e.g., if the ASI conducts an observation related to Weight and Balance (W&B), enter Element 4.4.5).

1) Accidents:

a) Operations: 1702, 1703, 1761.

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b) Maintenance: 3702, 3703, 3761.

c) Avionics: 5702, 5703, 5761.

2) Incidents:

a) Operations: 1711, 1712.

b) Maintenance: 3711, 3712.

c) Avionics: 5711, 5712.

3) Occurrences:

a) Operations: 1725.

b) Maintenance: 3720.

c) Avionics: 5720.

4) Extended Operations (ETOPS) Events: 4633, 6633.

10-1-1-7 through 10-1-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 1 GENERAL

Section 2 Safety Assurance System: Introduction to SAS Business Process and Tools

10-1-2-1 GENERAL.

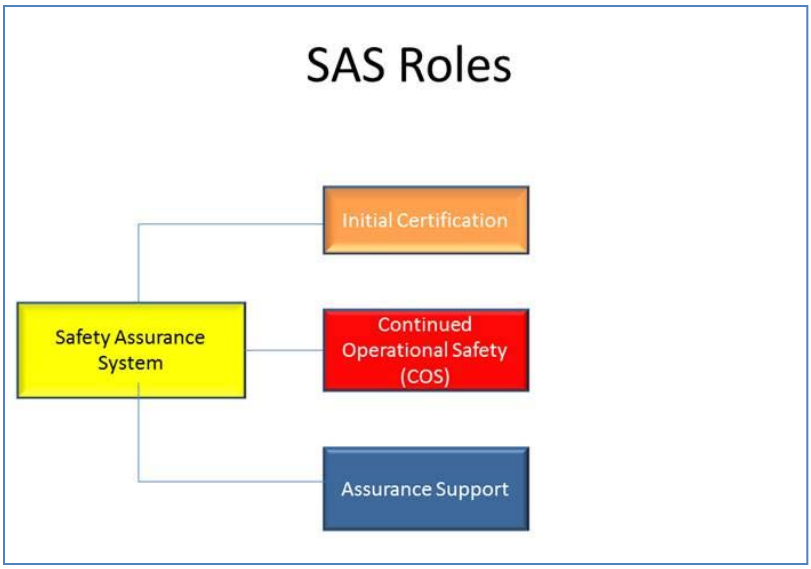
A. Purpose. The purpose of this section is to introduce the general principles, business process, and tools that support the foundation of the Safety Assurance System (SAS).

B. Scope. This section applies to all SAS users.

10-1-2-3 RESERVED.

10-1-2-5 BACKGROUND. Current Federal Aviation Administration (FAA) oversight processes have resulted in the safest aviation system in the world. To continuously improve this safety record, the FAA saw the need to develop a standardized risk-based, data-supported oversight system for all commercial operations. SAS is the process to assess the initial certification, routine surveillance, and certificate management for Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 145 certificate holders or applicants. SAS is based on system safety principles, Safety Attributes, and risk management (RM) to identify hazards and prevent loss of equipment and other property. SAS is designed based on three roles: Initial Certification, Continued Operational Safety (COS), and Assurance Support, as shown in Figure 10-1-2A, SAS Roles.

Figure 10-1-2A. SAS Roles



A. Initial Certification. The role of Initial Certification is to assess whether applicants can conduct business that complies with the regulations and FAA policy and guidance.

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B. Continued Operational Safety (COS). The role of COS includes the functions of routine surveillance and certificate management. The purpose of this function is to assess whether a certificate holder complies with regulatory standards and manages risk.

C. Assurance Support. This is a function of the Safety Analysis and Promotion Division. The role of Assurance Support is to keep the SAS program current and complete, which includes maintaining Data Collection Tools (DCT), automation version control, and feedback.

D. Safety Management Systems (SMS). An SMS is a formal, top-down, organization-wide approach to managing safety risk and assuring the effectiveness of safety risk controls. SMSs include systematic procedures, practices, and policies for the management of safety risk that are incorporated into every aspect of how the certificate holder/applicant operates (refer to 14 CFR part 5). SMSs consist of four main components: Safety Policy, Safety Risk Management (SRM), Safety Assurance (SA), and Safety Promotion. See Volume 17, Safety Management System, and Advisory Circular (AC) 120-92, Safety Management Systems for Aviation Service Providers.

E. System or Subsystem Performance Assessment (SPA) and Element Performance Assessments (EPA). Performance Assessments (PA) are used to determine if the certificate holder's or applicant's operating systems are producing the intended results, as well as to confirm the certificate holder's or applicant's risk assessment is occurring through their monitoring process and they are taking appropriate corrective action when needed. This includes mitigation or control of hazards and risks and the ability to detect latent, systemic failures that may occur over time or due to subtle environmental changes.

1) SPAs consist of System or Subsystem Performance (SP) DCTs that are planned with a baseline of 6 months, 1 year, or 2 years.

2) EPAs consist of Element Performance (EP) DCTs that are planned as a result of risk, previous findings, or as determined by the principal inspector (PI).

3) An EPA may be accomplished following the completion of an Element Design Assessment (EDA) to verify the certificate holder's or applicant's system is performing as intended.

F. Element Design Assessment (EDA). EDAs are an important function of SAS because safety is the outcome of a properly designed system. Poor system design compromises SRM. EDAs are used to ensure a certificate holder's or applicant's operating systems are designed to comply with the intent of regulations and system safety. EDAs consist of Element Design (ED) DCTs that are planned or a result of risk, previous findings, or as determined by the PI.

1) EDAs are used during certification to ensure an applicant's operating systems are designed to comply with the intent of the regulations. EDAs use a standardized, systematic approach to determine an applicant's qualification for an operating certificate.

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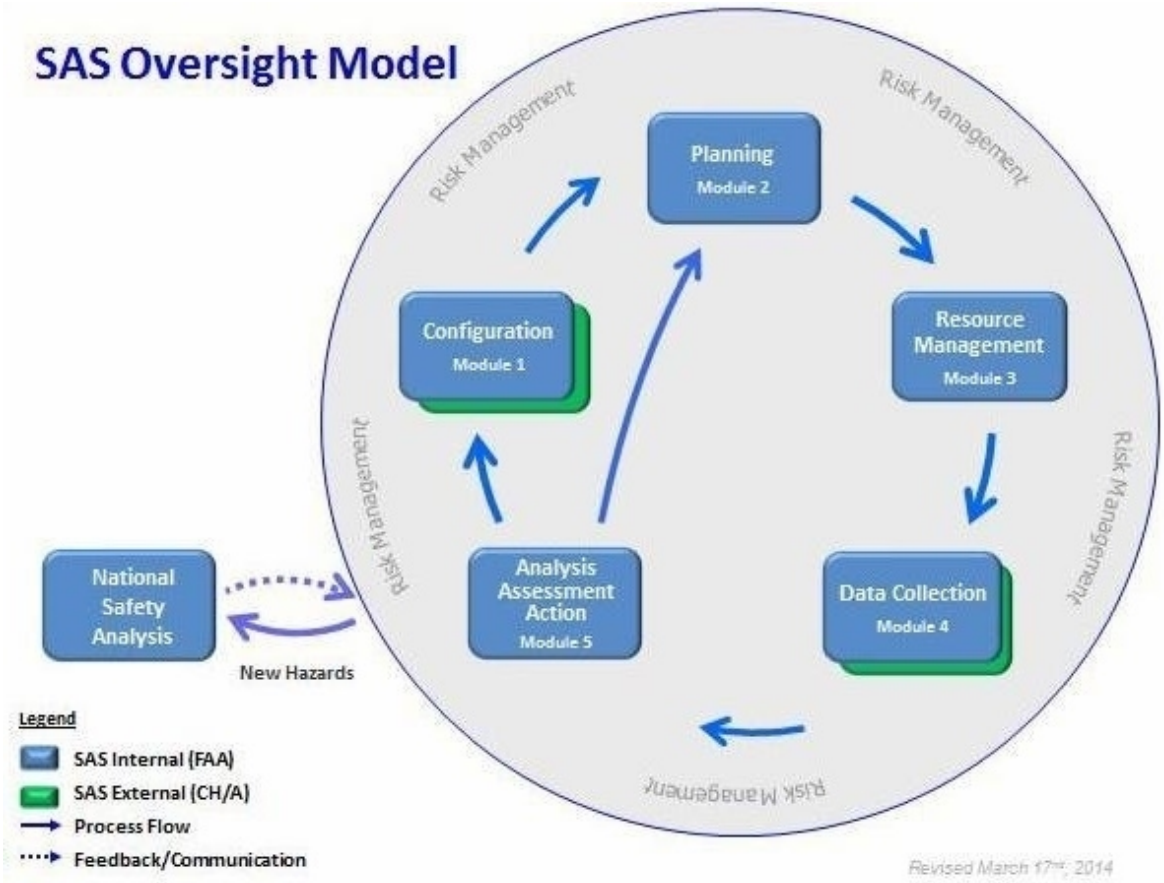
2) EDAs are used in certificate management oversight to approve or accept new or changed programs. EDAs verify that the certificate holder's systems are designed to meet the intent of regulatory requirements during new program reviews, performance issues, FAA-initiated changes, or when the PI determines the need.

G. SAS Oversight Model. The following model in Figure 10-1-2B, SAS Oversight Model, illustrates the relationship of the five business process modules, National Safety Analysis (NSA), and RM. RM is defined as a process composed of describing the system; identifying the hazards; and analyzing, assessing, and controlling risk. The certificate holder or applicant has access to Module 1, Configuration, and Module 4, Data Collection, through the external portal. RM is inherent within the five modules through the planning, executing, and assessing of the collected data. Situations that require a more indepth look may require the use of the risk management process (RMP) to document and manage resources for additional oversight.

Figure 10-1-2B. SAS Oversight Model



H. Description of Business Process. SAS incorporates five business process modules for the Initial Certification and COS of certificate holders or applicants. The application of each process may be different depending on whether aviation safety inspectors (ASI) are conducting a PA or Design Assessment (DA). The overall purpose of each module is as follows:

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1) Module 1, Configuration. The PI/certification project manager (CPM) uses the configuration process to assess a certificate holder's or applicant's request for a new or changed scope of operation and to develop a Certificate Holder Operating Profile (CHOP). The operating profile contains DCTs scoped to the certificate holder's or applicant's type of operation. The certificate holder or applicant has access to the Configuration Module through the external portal.

2) Module 2, Planning. The PI/CPM uses the planning process to develop a risk-based, data-supported plan for SPAs. This module contains the Certificate Holder Assessment Tool (CHAT) and the Comprehensive Assessment Plan (CAP).

3) Module 3, Resource Management. The Frontline Manager (FLM) uses the resource management process to assign work and manage resources for the execution of the data collection plan.

4) Module 4, Data Collection, Data Reporting, and Data Review. The data collection process consists of data collection, data reporting, and data review. The certificate holder or applicant has access to scoped DCTs through the external portal.

a) Data Collection. The ASI uses the data collection process to collect data while conducting oversight of the certificate holder's or applicant's process design and performance. The purpose of collecting data is to gather information to make informed decisions about the certificate holder's or applicant's operating systems:

1. Before approving or accepting them when required to do so by the regulations, and

2. During recurring PAs.

b) Data Reporting. The ASI/aviation safety technician (AST) or aviation safety assistant (ASA) uses the data reporting process to transfer collected data into the automation.

c) Data Review. The data reviewer uses the data review process to evaluate reported data based on the data quality guidelines (DQG).

5) Module 5, Analysis, Assessment, and Action (AAA). The AAA consists of analysis, assessment, and action.

a) Analysis and Assessment. The PI/CPM uses the analysis and assessment process to make informed decisions about the certificate holder's or applicant's operating systems:

1. Before approving or accepting them when required to do so by the regulations, and

2. During recurring PAs.

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b) Action. The PI/CPM uses the action process to determine a course of action based on the decisions made during analysis and assessment of negative findings. These items are tracked in the Action Item Tracking Tool (AITT).

I. External Portal.

1) The external portal is a secure, user-friendly, web-based interface for the certificate holder or applicant. The certificate holder or applicant can use the external portal to submit or view current editions of the following information:

- Configuration data;
- Preapplication Statement of Intent (PASI);
- FAA Form 8310-3, Application for Repair Station Certificate and/or Rating;
- Scoped ED DCTs (Module 4);
- Changes to scope of operations;
- Change requests to their certificate;
- Submit correspondence;
- Manuals; and
- Minimum equipment list (MEL) revisions.

2) The use of the external portal is mandatory for new applicants and highly encouraged for existing certificate holders. Users will enter their request for access in the "SAS Registration" page. An automated email containing a registration link will be sent from the FAA to the email address provided. Once the user submits all required information, the request for external portal access is routed to the user's respective Flight Standards office that was provided in the registration. If there are extenuating circumstances in which the user cannot access the portal, they should coordinate with the PI/CPM. The external portal is for external users only. FAA employees are not authorized to create accounts in the external portal. Refer to the SAS External Portal User Guide for more information.

3) Benefits for the certificate holder or applicant to use the portal include:

- Ease of submission and expedited processing and tracking of documents/requests;
- Documents/requests are sent directly to the PI/CPM, which eliminates wait time for the entry of information by the PI/CPM; and
- Access to scoped DCTs.

J. SAS Communications.

1) SAS Communications in Automation. SAS uses several different forms of communications in automation:

a) Broadcasts. Alerts that are sent by Safety Analysis and Promotion Division personnel. These are typically used to communicate news of general interest to both internal and external SAS users regarding system downtime or the announcement of a new or changed policy. Broadcasts are sent to specific segments of the SAS user community.

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b) Notifications. Alerts that are autogenerated by SAS and sent to both internal and external users to inform them of workflow updates or data changes.

c) Messages. Direct communications that can be sent between PIs and certificate holders/applicants. Messages can be used to announce action items or to share documents. All members of the Certificate Management Team (CMT) or certificate holder/applicant external portal users are able to view messages.

Messages Sent By:	**Are Routed To:**
Certificate holder/applicant	Certificate holder/applicant's FAA CMT.
PI/CPM user to certificate holder/applicant	Certificate holder/applicant external portal users and certificate holder/applicant's FAA CMT.

2) External Portal Communications. An external portal user or PI/CPM can view, initiate, and reply to communications from the Notifications, Messages, and Broadcasts tiles on the individual's SAS home page. Each communications tile includes a tally in its header bar that shows the total number of new (unread) items received.

K. National Safety Analysis (NSA). NSA is a key foundational component of SAS. NSA is a national-level function providing analytical support to identify new systemic hazards or safety issues within the extended aviation community overseen by the Flight Standards Service, assess adverse trends in safety performance, and evaluate the effectiveness of existing safety risk controls. A new hazard is identified as one in which the associated risk is not adequately controlled by current directives, or risk controls do not exist to effectively mitigate risk (e.g., in the case of new technology). The hazard may be a systemic or a potentially systemic safety issue that may apply to multiple certificate holders. Within SAS, PIs/CPMs have the ability to identify and record a new hazard as an "Identify New Hazard (Request NSA Support)."

L. Process Flowcharts. Each process module in this volume contains a process flowchart. The flowcharts illustrate responsibility for the process steps using horizontal bands called "swim lanes." Figure 10-1-2C, Configuration Process Flowchart—Swim Lanes, is an illustration of swim lanes. Figure 10-1-2D, Standard Flowchart Symbols, contains symbols used to indicate the various steps or tasks included in the flowchart.

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Figure 10-1-2C. Configuration Process Flowchart—Swim Lanes

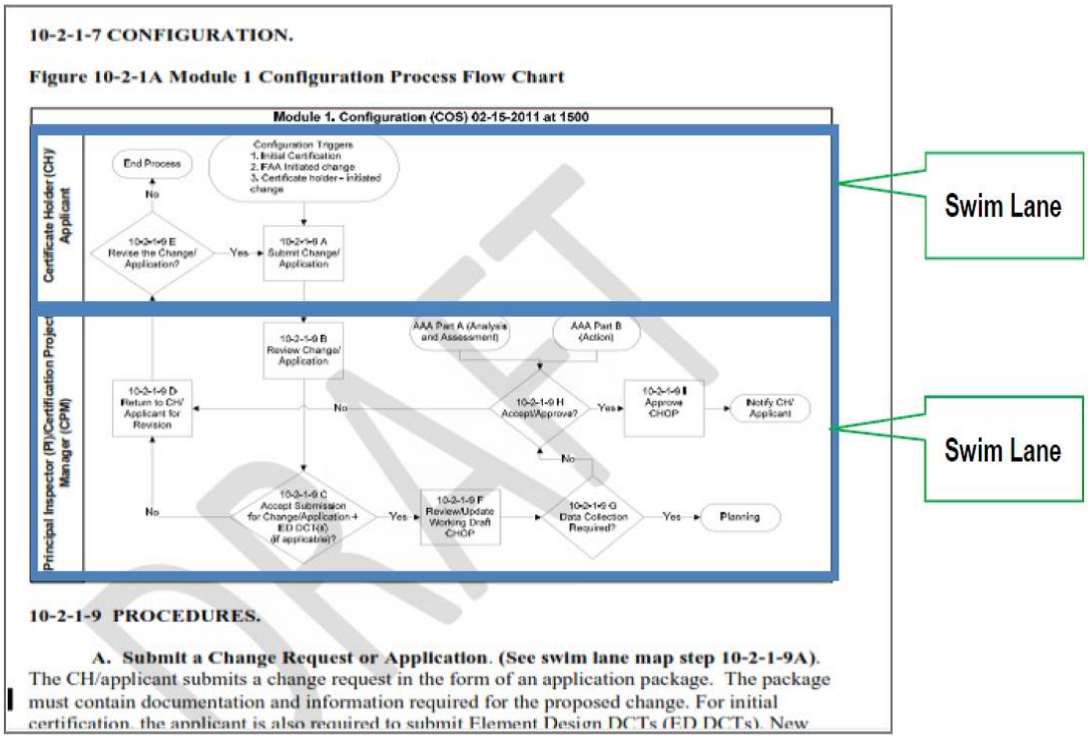
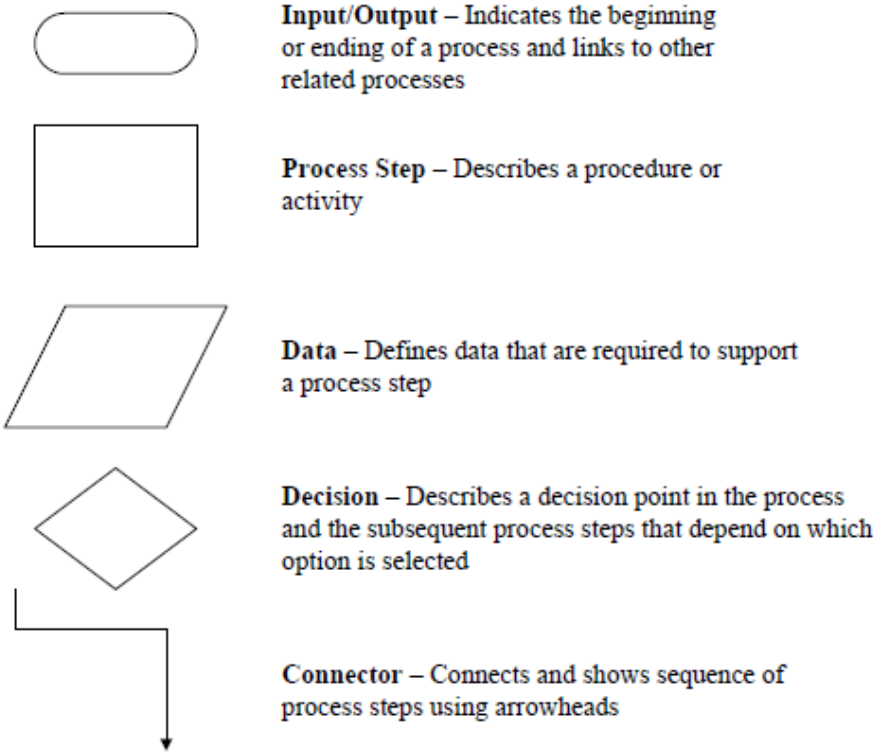


Figure 10-1-2D. Standard Flowchart Symbols



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M. Application of System Safety Concepts. Figure 10-1-2E, System Safety Process Model, illustrates the system safety process design. The certificate holder/applicant performs SRM whenever a change occurs or is introduced into the design of the system. This allows the certificate holder/applicant to identify associated hazards, complete a risk analysis, and perform a risk assessment. If risk is found during the SRM process, the certificate holder/applicant should implement a risk control action plan. Once the design of the system is accepted, approved, or put into operation, the certificate holder/applicant should make system assessments by monitoring system performance. This is done by collecting and analyzing data, and performing corrective action for problem resolution when a non-systemic issue is identified. When a systemic issue is identified, the certificate holder/applicant should return to the design in order to address the deficiencies identified. The ASI validates the certificate holder/applicant's design and performance of their system safety processes.

Figure 10-1-2E. System Safety Process Model

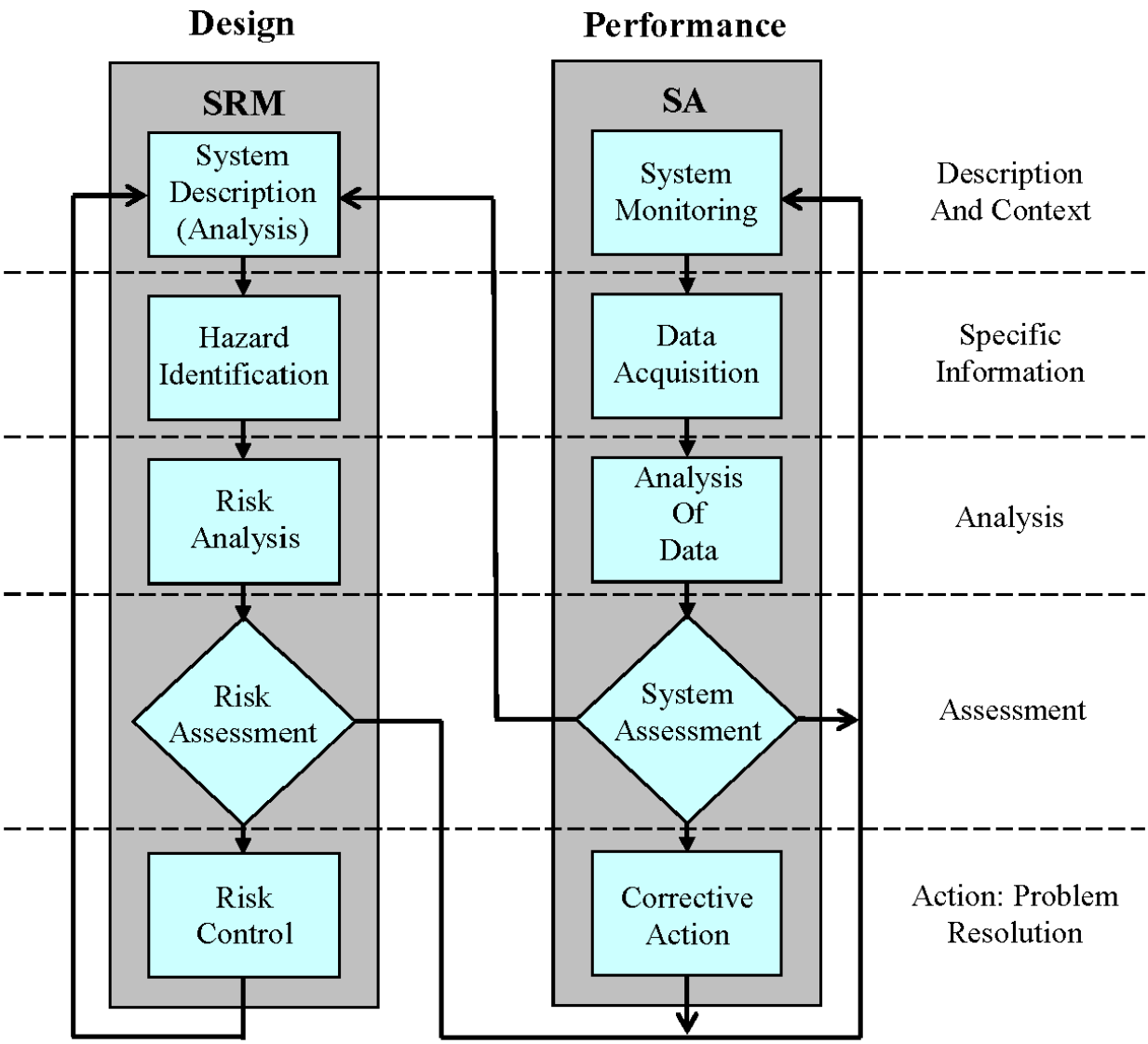

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Table 10-1-2A. Comparison of the System Safety Process and SAS Business Process

System Safety Process Step	SAS Business Process
Description and Context. Define the acceptable levels of safety. How does the system work and how do its components interact?	Module 1, Configuration. Regulations and policy define the acceptable level of safety. System description begins with the Certificate Holder Operating Profile (CHOP).
Specific Information. Where are the hazards in the system? What can go wrong?	Modules 1-5. Affirm safety risk related to hazards within system and operational environment is being effectively managed and mitigated.
Analysis. Determine the potential consequences that could result if hazards are not addressed or corrected.	Module 5, Analysis and Assessment. Principal inspectors (PI) analyze data to identify hazards and determine the level of risk associated with a hazard.
Assessment. What can be done to control the effects of the hazard and/or mitigate the associated levels of risk?	Module 5, Action. PIs identify a course of action to control the effects of the hazard and/or mitigate unacceptable levels of risk.
Action: Problem Resolution. Did the action work?	Module 2, Planning. PIs determine if the action eliminated the hazard or lowered the level of risk to acceptable levels. If not, then take additional action.

N. Master List of Functions (MLF). SAS uses a common structured process to analyze how systems/subsystems and elements interface. The MLF forms the basis for the system-based approach in SAS.

1) Each peer group has a defined set of systems, subsystems, and elements. A system is defined as a group of interrelated processes, which are a combination of people, procedures, materials, tools, equipment, facilities, and software operating in a specific environment to perform a specific task or achieve a specific purpose, support, or mission requirement. Elements are programs or actions that the certificate holder or applicant completes to support the systems/subsystems. See Figure 10-1-2F, Master List of Functions (System/Subsystem Level), as an example of a system/subsystem-level MLF.

2) Parts 121, 135, and 145 each have their own unique system/subsystem and elements based on peer group and scope of operation. See Table 10-1-2B, Mapping of Program Elements to Master List of Functions (SAS Approved Numbering), for the MLF list by peer group.

O. Peer Groups. Peer groups are categorized by 14 CFR part and operational description. Each certificate holder or applicant is placed into one or more peer groups as determined by their type of operations. See Figure 10-1-2G, Peer Groups and DCT Association, for the peer group list by 14 CFR part.

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Figure 10-1-2F. Master List of Functions (System/Subsystem Level)

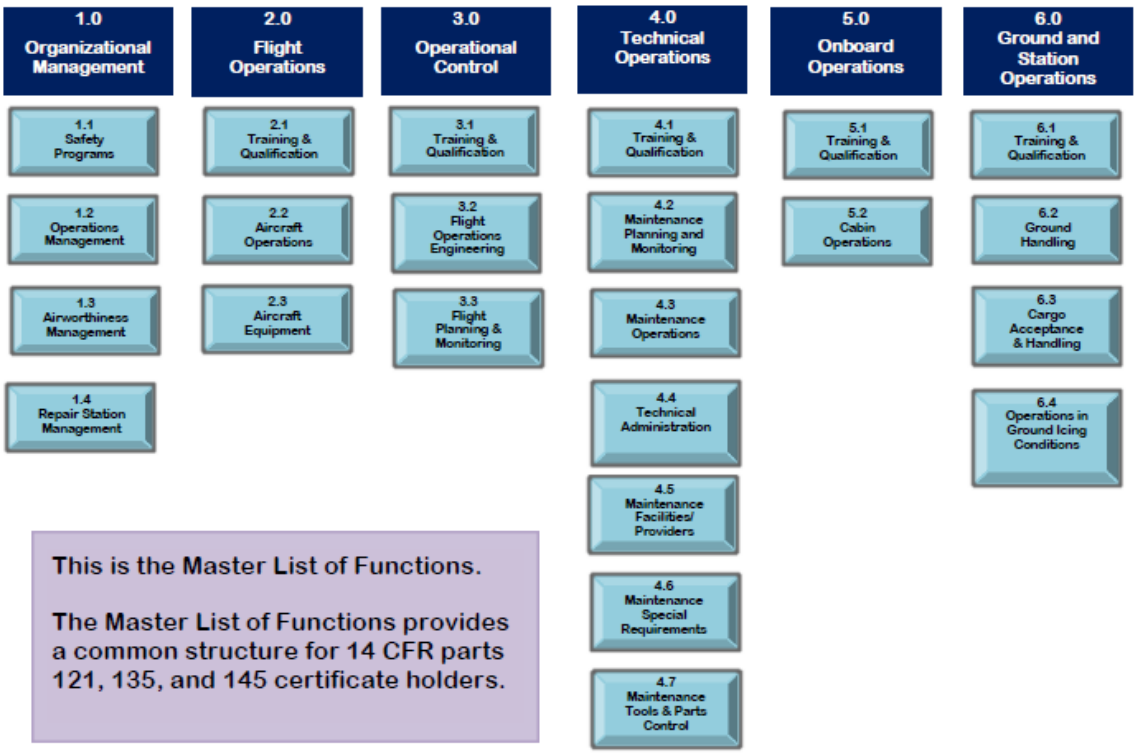

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Figure 10-1-2G. Peer Groups and DCT Association

Part	Peer Group	Certificate Holder Peer Groups	MLF Level for DCTs		
			SP DCTs	EP DCTs	ED DCTs
121	A	Part 121 Certificate Holders	Subsystem	Element	Element
135	B	Part 135 (10 or more seats)	Subsystem	Element	Element
	C	Part 135 (9 or less seats)	System	Element	Element
	D	Part 135 (9 or less seats - single pilot only)	System	Element	Element
	E	Part 135 (HAA)	Subsystem	Element	Element
145	F	Part 145 Within U.S.	System	Element	Element
	G	Part 145 Outside U.S. without Aviation Safety Agreement	System	Element	Element
	H	Part 145 Outside U.S. with Aviation Safety Agreement	System	Element	Element

P. SAS Tools. SAS tools are located within the modules of SAS to standardize the process of Initial Certification and COS. They include:

1) Certificate Holder Operating Profile (CHOP). The operating profile is located in Module 1, and the main purpose of this profile is to generate a specific set of DCTs used to conduct PAs and DAs. The operating profile is developed from configuration data taken from the enhanced Vital Information Database (eVID) and operations specifications (OpSpecs), as well as SAS-only data, which are questions that must be answered by the PIs/CPMs. The operating profile represents a certificate holder's or applicant's scope of operations. The output of the operating profile is scoped data collection questions.

2) Certificate Holder Assessment Tool (CHAT). The CHAT is an automated tool for each certificate holder that contains a series of risk indicators and PI options, which help the PI assess risk. For an applicant, the initial CHAT is completed by the CPM during the Initial Certification Planning Meeting. The output of the CHAT will assist the PI to justify changes in resource order on the CAP. The CHAT is updated based on the results of Module 5. Module 5 closes the loop in the SAS model. The CHAT is reviewed and updated after the AAA or when any new risk is identified. If no new risk has been identified, the CHAT is reviewed and updated at least annually to document that no action is required.

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3) Comprehensive Assessment Plan (CAP). The CAP is a tool used for planning, documenting, and tracking assessments. The PI/CPM uses the CAP to schedule, adjust resource order, plan due dates of assessments, and to record the reasons for making those adjustments. The CAP is a 2-year plan.

4) Action Item Tracking Tool (AITT). The AITT is located in Module 5, and PIs use the AITT to track corrective actions that result from Module 5 or other oversight functions. The AITT is a repository that provides access/manages functionality on all the action items created for any given certificate holder. The AITT includes action items created from various modules in the automation, such as the AAA, CHAT, data collection, and AITT itself. The AITT does not replace documentation requirements specified in other guidance.

5) Risk Management Process (RMP)/New Hazard. The RMP and new hazard process is an interactive management activity dedicated to ensuring that hazards are identified, documented, eliminated, or controlled within the program.

6) System or Subsystem Performance Data Collection Tool (SP DCT). SP DCTs are located in Module 4. ASIs use SP DCTs to collect data for the SPA based on a specific interval. Intervals are defined as 6 months (high criticality), 1 year (medium criticality), or 2 years (low criticality).

7) Element Performance Data Collection Tool (EP DCT). EP DCTs are located in Module 4. ASIs use the EP DCTs to collect data for the EPA. EP DCTs can be created on an as-needed basis.

8) Element Design Data Collection Tool (ED DCT). ED DCTs are located in Module 4. ASIs use the ED DCTs to collect data for an EDA. A certificate holder or applicant uses ED DCTs during Initial Certification to document the results of self-audits. ED DCTs can be created on an as-needed basis.

9) Essential Maintenance Provider (EMP). An EMP is any person with whom a part 121 or 135 certificate holder has made arrangements for the accomplishment of any of its on-wing maintenance or alterations designated as Required Inspection Items (RII).

10) Custom Data Collection Tool (C DCT). There are several types of C DCTs. C DCTs can be used for focused inspections, special emphasis oversight, and to collect data on specific areas of concern outside of the normal planning schedule. If data needs to be collected on areas not covered by EP DCTs and ED DCTs, then a National/Divisional C DCT template can be created. See Volume 10, Chapter 5, Section 1, Table 10-5-1A, Data Collection Type and Description, for additional information.

11) National/Divisional C DCTs. A National/Divisional C DCT is a template that consists of questions for focused inspections. The National Program Office Branch's Continual Improvement Program Office (CIPO) Technical Support Team (TST) develops a National/Divisional C DCT based on a request from the Office of Air Carrier or General Aviation Safety Assurance or the Office of Safety Standards. The National/Divisional C DCT can include questions found in existing DCTs and/or custom questions. A custom question is one

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that is created for the C DCT and is not currently in a DCT. A National/Divisional C DCT created from a template will automatically go through the AAA.

12) National/Divisional Instructions for the National En Route Inspection and Random Inspection (RI) Template. This field is used by the Office of Safety Standards to provide instructions on special emphasis areas that require data collection. The Office of Safety Standards divisions will need to coordinate with the TST to add the instructions in the relevant fields. To request a National/Divisional C DCT or National/Divisional instructions:

a) At the SAS Assistance, Feedback, or Enhancement (SAFE) site (https://avssp.faa.gov/avs/afs900/CIPO/PRF/SitePages/Home.aspx), locate the form in the "News & Documentation" section called "Form to Request a SAS National-Divisional Custom DCT."

b) Complete the form and follow the steps to submit the SAFE. Include the form as an attachment in the SAFE.

c) The SAFE is routed to the TST for authoring. A representative from the TST will contact the SAFE submitter.

13) Random Inspection (RI) (Ramp). RIs provide ASIs with the opportunity to evaluate an air carrier operation while the crewmembers and aircraft are on the ground. An RI is an effective method for evaluating a certificate holder's ability to prepare both the aircraft and crew for a flight to be conducted.

14) En Route Inspections. En Route inspections include both flight deck and cabin inspections. The primary objective of a flight deck En Route inspection is for an ASI to observe and evaluate flight operations within the operational environment of the air transportation system. The primary objective of a cabin En Route inspection is to ensure that a certificate holder's cabin safety procedures adhere to 14 CFR and adhere to safe operating practices. Cabin En Route inspections provide information concerning the effectiveness of flight attendant (F/A) training programs, operator procedures, and the condition and maintenance of aircraft emergency equipment and furnishings.

15) Dynamic Observation Report (DOR). The DOR is used to record an unfavorable observation of performance outside the planned oversight process. A DOR has two options: Question-Based or "No Applicable Questions." The Question-Based DOR is used when SP or EP DCT questions exist that are related to the observation. If no SP DCT questions relate to the observation, select "No Applicable Questions." The Flight Standards Service can use a DOR to notify the Office of Hazardous Materials Safety (AXH) when documenting a hazardous materials (hazmat) safety issue for parts 121, 129, and 135 by selecting the "AXH" organization in the automation. AXH has the ability to notify the Flight Standards Service of any safety issue by submitting a DOR for parts 121 and 135.

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Q. SAS Assistance, Feedback, or Enhancement (SAFE) Process and Continuous Improvement. SAS uses a continuous feedback loop to improve SAS products. ASIs should submit their concerns or recommendations using the SAFE feature in SAS automation. For more information on the SAFE process, refer to the SAFE User Guide found on the SAFE SharePoint site, under "News & Documentation."

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Table 10-1-2B. Mapping of Program Elements to Master List of Functions (SAS Approved Numbering)

Title 14 CFR Part 121 (Peer Group A)

1.0 Organizational Management	2.0 Flight Operations	3.0 Operational Control	4.0 Technical Operations	5.0 Onboard Operations	6.0 Ground and Station Operations
1.1 Safety Programs (H) 1.1.2 (OP) Safety Program (Ground and Flight) 1.1.3 (AW) CASS 1.1.4 (AW) Reliability Program 1.1.6 (AW) Safety Program **1.2 Operations Management (L)** 1.2.1 (OP) Part 119 Required Personnel 1.2.2 (OP) Manual Management 1.2.3 (OP) Computer-Based Recordkeeping System **1.3 Airworthiness Management (L)** 1.3.1 (AW) Part 119 Required Personnel 1.3.2 (AW) Manual Management 1.3.3 (AW) CASE	**2.1 Training & Qualification (M)** 2.1.1 (OP) Training of Flight Crewmembers 2.1.2 (OP) Training of Check Airmen and Instructors 2.1.3 (OP) Simulators/Training Devices 2.1.4 (OP) Outsource Crewmember Training 2.1.5 (OP) Appropriate Airmen/Crewmember Checks & Quals 2.1.6 (OP) Advanced Qualification Program (AQP) 2.1.7 (OP) Flight Crewmember Flight/Duty/Rest Time **2.2 Aircraft Operations (H)** 2.2.1 (OP) Airmen Duties/Flight Deck Procedures 2.2.2 (OP) Category II & III Ops 2.2.3 (OP) Pilot Operating Limitations/Recent Experience **2.3 Aircraft Equipment (M)** 2.3.1 (OP) Appropriate Operational Equipment	**3.1 Training & Qualification (M)** 3.1.1 (OP) Training and Qualifications of Dispatchers and Flight Followers 3.1.2 (OP) Dispatcher Duty/Rest Time **3.2 Flight Operations Engineering (M)** 3.2.1 (OP) Aircraft Performance Operating Limitations 3.2.2 (OP) Use of Approved Areas, Routes, and Airports 3.2.3 (OP) Special Navigation Areas of Operation 3.2.4 (OP) RVSM Authorization **3.3 Flight Planning & Monitoring (H)** 3.3.1 (OP) Operational Control 3.3.2 (OP) Dispatch/Flight Release 3.3.3 (OP) Flight/Load Manifest/Weight & Balance Control 3.3.4 (OP) MEL/CDL/NEF Procedures 3.3.5 (OP) Extended Operations (ETOPS)	**4.1 Training & Qualification (L)** 4.1.1 (AW) RII Personnel 4.1.2 (AW) Maintenance Certificate Requirements 4.1.3 (AW) Maintenance/RII Training Program **4.2 Maintenance Planning and Monitoring (H)** 4.2.1 (AW) Maintenance/Inspection Requirements 4.2.2 (AW) Maintenance/Inspection Schedule 4.2.3 (AW) AD Management 4.2.4 (AW) Recordkeeping 4.2.5 (AW) Maintenance Control Functions **4.3 Maintenance Operations (H)** 4.3.1 (AW) Airworthiness Release/Maintenance Log Requirements 4.3.2 (AW) RII 4.3.3 (AW) MEL/CDL/NEF and Other Deferred Maintenance 4.3.4 (AW) Major Repairs & Alterations 4.3.5 (AW) ETOPS **4.4 Technical Administration (L)** 4.4.1 (AW) Special Flight Permits 4.4.2 (AW) MIS/SDR 4.4.3 (AW) Short-term Escalations 4.4.4 (AW) Aircraft Acceptance Process 4.4.5 (AW) Weight & Balance Program **4.5 Maintenance Facilities/Providers (M)** 4.5.1 (AW) Maintenance Facility/Main Maintenance Base 4.5.2 (AW) Maintenance Providers 4.5.3 (AW) Line Stations **4.6 Maintenance Special Requirements (M)** 4.6.1 (AW) Avionics Special Emphasis Programs 4.6.2 (AW) Maintenance Special Emphasis Programs **4.7 Maintenance Tools & Parts Control (M)** 4.7.1 (AW) Control of Calibrated Tools & Test Equipment 4.7.2 (AW) Aircraft Parts/Material Control	**5.1 Training & Qualification (M)** 5.1.1 (OP) Training of Flight Attendants 5.1.2 (OP) Flight Attendant Duty/Rest Time **5.2 Cabin Operations (M)** 5.2.1 (OP) Crewmember Duties/Cabin Procedures 5.2.2 (OP) Carry-on Baggage Program 5.2.3 (OP) Exit Seating Program 5.2.4 (OP) Passenger Handling	**6.1 Training & Qualification (M)** 6.1.1 (OP) Training of Station Personnel 6.1.2 (OP) Hazardous Material Training Program **6.2 Ground Handling (M)** 6.2.1 (AW) Fueling 6.2.4 (OP) Line Station Operations/Ground Personnel Duties **6.3 Cargo Acceptance & Handling (H)** 6.3.1 (OP) Carriage of Cargo 6.3.2 (OP) Hazardous Materials 6.3.3 (AW) Cargo Handling Equipment Systems & Appliances 6.3.4 (AW) Carriage of Cargo **6.4 Operations in Ground Icing Conditions (M)** 6.4.1 (AW) Operations in Ground Icing 6.4.2 (OP) Operations in Ground Icing

Subsystem Criticality: High–(H), Medium–(M), Low–(L)

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Table 10-1-2B. Mapping of Program Elements to Master List of Functions (SAS Approved Numbering) (Continued)

Title 14 CFR Part 135 (10 or More) (Peer Group B)

1.0 Organizational Management	2.0 Flight Operations	3.0 Operational Control	4.0 Technical Operations	5.0 Onboard Operations	6.0 Ground and Station Operations
1.1 Safety Programs (H) 1.1.2 (OP) Safety Program (Ground and Flight) 1.1.3 (AW) CASS 1.1.4 (AW) Reliability Program 1.1.6 (AW) Safety Program **1.2 Operations Management (L)** 1.2.1 (OP) Part 119 Required Personnel 1.2.2 (OP) Manual Management 1.2.3 (OP) Computer-Based Recordkeeping System **1.3 Airworthiness Management (L)** 1.3.1 (AW) Part 119 Required Personnel 1.3.2 (AW) Manual Management 1.3.3 (AW) CASE	**2.1 Training & Qualification (M)** 2.1.1 (OP) Training of Flight Crewmembers 2.1.2 (OP) Training of Check Airmen and Instructors 2.1.3 (OP) Simulators/Training Devices 2.1.4 (OP) Outsource Crewmember Training 2.1.5 (OP) Appropriate Airmen/Crewmember Checks & Quals 2.1.6 (OP) Advanced Qualification Program (AQP) 2.1.7 (OP) Flight Crewmember Flight/Duty/Rest Time 2.1.8 (OP) Training of Operations Control Specialists 2.1.9 (OP) Operations Control Specialist Duty/Rest Time **2.2 Aircraft Operations (H)** 2.2.1 (OP) Airmen Duties/Flight Deck Procedures 2.2.2 (OP) Category II & III Ops 2.2.3 (OP) Pilot Operating Limitations/Recent Experience **2.3 Aircraft Equipment (M)** 2.3.1 (OP) Appropriate Operational Equipment	**3.2 Flight Operations Engineering (M)** 3.2.1 (OP) Aircraft Performance Operating Limitations 3.2.2 (OP) Use of Approved Areas, Routes, and Airports 3.2.3 (OP) Special Navigation Areas of Operation 3.2.4 (OP) RVSM Authorization **3.3 Flight Planning & Monitoring (H)** 3.3.1 (OP) Operational Control 3.3.3 (OP) Flight/Load Manifest/Weight & Balance Control 3.3.4 (OP) MEL/CDL/NEF Procedures 3.3.5 (OP) Extended Operations (ETOPS)	**4.1 Training & Qualification (L)** 4.1.1 (AW) RII Personnel 4.1.2 (AW) Maintenance Certificate Requirements 4.1.3 (AW) Maintenance/RII Training Program **4.2 Maintenance Planning and Monitoring (H)** 4.2.1 (AW) Maintenance/Inspection Requirements 4.2.2 (AW) Maintenance/Inspection Schedule 4.2.3 (AW) AD Management 4.2.4 (AW) Recordkeeping 4.2.5 (AW) Maintenance Control Functions **4.3 Maintenance Operations (H)** 4.3.1 (AW) Airworthiness Release / Maintenance Log Requirements 4.3.2 (AW) RII 4.3.3 (AW) MEL/CDL/NEF and Other Deferred Maintenance 4.3.4 (AW) Major Repairs & Alterations 4.3.5 (AW) ETOPS **4.4 Technical Administration (L)** 4.4.1 (AW) Special Flight Permits 4.4.2 (AW) MIS/SDR 4.4.3 (AW) Short-term Escalations 4.4.4 (AW) Aircraft Acceptance Process 4.4.5 (AW) Weight & Balance Program **4.5 Maintenance Facilities/Providers (M)** 4.5.1 (AW) Maintenance Facility / Main Maintenance Base 4.5.2 (AW) Maintenance Providers 4.5.3 (AW) Line Stations **4.6 Maintenance Special Requirements (M)** 4.6.1 (AW) Avionics Special Emphasis Programs 4.6.2 (AW) Maintenance Special Emphasis Programs **4.7 Maintenance Tools & Parts Control (M)** 4.7.1 (AW) Control of Calibrated Tools & Test Equipment 4.7.2 (AW) Aircraft Parts/Material Control	**5.1 Training & Qualification (M)** 5.1.1 (OP) Training of Flight Attendants 5.1.2 (OP) Flight Attendant Duty/Rest Time **5.2 Cabin Operations (M)** 5.2.1 (OP) Crewmember Duties/Cabin Procedures 5.2.2 (OP) Carry-on Baggage Program 5.2.3 (OP) Exit Seating Program 5.2.4 (OP) Passenger Handling	**6.1 Training & Qualification (M)** 6.1.1 (OP) Training of Station Personnel 6.1.2 (OP) Hazardous Material Training Program **6.2 Ground Handling (M)** 6.2.1 (AW) Fueling 6.2.4 (OP) Line Station Operations/Ground Personnel Duties **6.3 Cargo Acceptance & Handling (H)** 6.3.1 (OP) Carriage of Cargo 6.3.2 (OP) Hazardous Materials 6.3.3 (AW) Cargo Handling Equipment Systems & Appliances 6.3.4 (AW) Carriage of Cargo **6.4 Operations in Ground Icing Conditions (M)** 6.4.1 (AW) Operations in Ground Icing 6.4.2 (OP) Operations in Ground Icing

Subsystem Criticality: High–(H), Medium–(M), Low–(L)

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Table 10-1-2B. Mapping of Program Elements to Master List of Functions (SAS Approved Numbering) (Continued)

Title 14 CFR Part 135 (9 or Less) (Peer Group C)

1.0 Organizational Management (L)	2.0 Flight Operations (M)	3.0 Operational Control (M)	4.0 Technical Operations (M)	5.0 Onboard Operations (M)	6.0 Ground and Station Operations (M)
1.1 Safety Programs 1.1.2 (OP) Safety Program (Ground and Flight) 1.1.3 (AW) CASS 1.1.4 (AW) Reliability Program 1.1.6 (AW) Safety Program **1.2 Operations Management** 1.2.1 (OP) Part 119 Required Personnel 1.2.2 (OP) Manual Management 1.2.3 (OP) Computer-Based Recordkeeping System **1.3 Airworthiness Management** 1.3.1 (AW) Part 119 Required Personnel 1.3.2 (AW) Manual Management	**2.1 Training & Qualification** 2.1.1 (OP) Training of Flight Crewmembers 2.1.2 (OP) Training of Check Airmen and Instructors 2.1.3 (OP) Simulators/Training Devices 2.1.4 (OP) Outsource Crewmember Training 2.1.5 (OP) Appropriate Airmen/Crewmember Checks & Quals 2.1.6 (OP) Advanced Qualification Program (AQP) 2.1.7 (OP) Flight Crewmember Flight/Duty/Rest Time 2.1.8 (OP) Training of Operations Control Specialists 2.1.9 (OP) Operations Control Specialist Duty/Rest Time **2.2 Aircraft Operations** 2.2.1 (OP) Airmen Duties/Flight Deck Procedures 2.2.2 (OP) Category II & III Ops 2.2.3 (OP) Pilot Operating Limitations/Recent Experience **2.3 Aircraft Equipment** 2.3.1 (OP) Appropriate Operational Equipment	**3.2 Flight Operations Engineering** 3.2.1 (OP) Aircraft Performance Operating Limitations 3.2.2 (OP) Use of Approved Areas, Routes, and Airports 3.2.3 (OP) Special Navigation Areas of Operation 3.2.4 (OP) RVSM Authorization **3.3 Flight Planning & Monitoring** 3.3.1 (OP) Operational Control 3.3.3 (OP) Flight/Load Manifest/Weight & Balance Control 3.3.4 (OP) MEL/CDL/NEF Procedures 3.3.5 (OP) Extended Operations (ETOPS)	**4.1 Training & Qualification** 4.1.1 (AW) RII Personnel 4.1.2 (AW) Maintenance Certificate Requirements 4.1.3 (AW) Maintenance/RII Training Program **4.2 Maintenance Planning and Monitoring** 4.2.1 (AW) Maintenance/Inspection Requirements 4.2.2 (AW) Maintenance/Inspection Schedule 4.2.3 (AW) AD Management 4.2.4 (AW) Recordkeeping 4.2.5 (AW) Maintenance Control Functions **4.3 Maintenance Operations** 4.3.1 (AW) Airworthiness Release/Maintenance Log Requirements 4.3.2 (AW) RII 4.3.3 (AW) MEL/CDL/NEF/and Other Deferred Maintenance 4.3.4 (AW) Major Repairs & Alterations 4.3.5 (AW) ETOPS **4.4 Technical Administration** 4.4.1 (AW) Special Flight Permits 4.4.2 (AW) MIS/SDR 4.4.3 (AW) Short-term Escalations 4.4.4 (AW) Aircraft Acceptance Process 4.4.5 (AW) Weight & Balance Program **4.5 Maintenance Facilities/Providers** 4.5.1 (AW) Maintenance Facility/Main Maintenance Base 4.5.2 (AW) Maintenance Providers 4.5.3 (AW) Line Stations **4.6 Maintenance Special Requirements** 4.6.1 (AW) Avionics Special Emphasis Programs 4.6.2 (AW) Maintenance Special Emphasis Programs **4.7 Maintenance Tools & Parts Control** 4.7.1 (AW) Control of Calibrated Tools & Test Equipment 4.7.2 (AW) Aircraft Parts/Material Control	**5.1 Training & Qualification** 5.1.1 (OP) Training of Flight Attendants 5.1.2 (OP) Flight Attendant Duty/Rest Time **5.2 Cabin Operations** 5.2.1 (OP) Crewmember Duties/Cabin Procedures 5.2.2 (OP) Carry-on Baggage Program 5.2.4 (OP) Passenger Handling	**6.1 Training & Qualification** 6.1.1 (OP) Training of Station Personnel 6.1.2 (OP) Hazardous Material Training Program **6.2 Ground Handling** 6.2.1 (AW) Fueling 6.2.4 (OP) Line Station Operations/Ground Personnel Duties **6.3 Cargo Acceptance & Handling** 6.3.1 (OP) Carriage of Cargo 6.3.2 (OP) Hazardous Materials 6.3.3 (AW) Cargo Handling Equipment Systems & Appliances 6.3.4 (AW) Carriage of Cargo **6.4 Operations in Ground Icing Conditions** 6.4.1 (AW) Operations in Ground Icing 6.4.2 (OP) Operations in Ground Icing

System Criticality: High–(H), Medium–(M), Low–(L)

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Table 10-1-2B. Mapping of Program Elements to Master List of Functions (SAS Approved Numbering) (Continued)

Title 14 CFR Part 135 (Single Pilot) (Peer Group D)

1.0 Organizational Management (L)	2.0 Flight Operations (M)	3.0 Operational Control (M)	4.0 Technical Operations (M)	5.0 Onboard Operations (M)	6.0 Ground and Station Operations (M)
1.1 Safety Programs 1.1.2 (OP) Safety Program (Ground and Flight) 1.1.6 (AW) Safety Program **1.2 Operations Management** 1.2.3 (OP) Computer-Based Recordkeeping System	**2.1 Training & Qualification** 2.1.5 (OP) Appropriate Airmen/Crewmember Checks & Quals 2.1.7 (OP) Flight Crewmember Flight/Duty/Rest Time **2.2 Aircraft Operations** 2.2.1 (OP) Airmen Duties/Flight Deck Procedures 2.2.3 (OP) Pilot Operating Limitations/Recent Experience **2.3 Aircraft Equipment** 2.3.1 (OP) Appropriate Operational Equipment	**3.2 Flight Operations Engineering** 3.2.1 (OP) Aircraft Performance Operating Limitations 3.2.2 (OP) Use of Approved Areas, Routes, and Airports 3.2.3 (OP) Special Navigation Areas of Operation 3.2.4 (OP) RVSM Authorization **3.3 Flight Planning & Monitoring** 3.3.1 (OP) Operational Control 3.3.3 (OP) Flight/Load Manifest/Weight & Balance Control 3.3.4 (OP) MEL/CDL/NEF Procedures	**4.1 Training & Qualification** 4.1.2 (AW) Maintenance Certificate Requirements **4.2 Maintenance Planning and Monitoring** 4.2.1 (AW) Maintenance/Inspection Requirements 4.2.2 (AW) Maintenance/Inspection Schedule 4.2.3 (AW) AD Management 4.2.4 (AW) Recordkeeping 4.2.5 (AW) Maintenance Control Functions **4.3 Maintenance Operations** 4.3.1 (AW) Airworthiness Release/Maintenance Log Requirements 4.3.3 (AW) MEL/CDL/NEF and Other Deferred Maintenance 4.3.4 (AW) Major Repairs & Alterations **4.4 Technical Administration** 4.4.1 (AW) Special Flight Permits 4.4.2 (AW) MIS/SDR 4.4.4 (AW) Aircraft Acceptance Process 4.4.5 (AW) Weight & Balance Program **4.5 Maintenance Facilities/Providers** 4.5.1 (AW) Maintenance Facility/Main Maintenance Base 4.5.2 (AW) Maintenance Providers 4.5.3 (AW) Line Stations **4.6 Maintenance Special Requirements** 4.6.1 (AW) Avionics Special Emphasis Programs **4.7 Maintenance Tools & Parts Control** 4.7.1 (AW) Control of Calibrated Tools & Test Equipment 4.7.2 (AW) Aircraft Parts/Material Control	**5.2 Cabin Operations** 5.2.1 (OP) Crewmember Duties/Cabin Procedures 5.2.2 (OP) Carry-on Baggage Program 5.2.4 (OP) Passenger Handling	**6.1 Training & Qualification** 6.1.1 (OP) Training of Station Personnel 6.1.2 (OP) Hazardous Material Training Program **6.2 Ground Handling** 6.2.1 (AW) Fueling 6.2.4 (OP) Line Station Operations/Ground Personnel Duties **6.3 Cargo Acceptance & Handling** 6.3.1 (OP) Carriage of Cargo 6.3.2 (OP) Hazardous Materials 6.3.3 (AW) Cargo Handling Equipment Systems & Appliances 6.3.4 (AW) Carriage of Cargo **6.4 Operations in Ground Icing Conditions** 6.4.1 (AW) Operations in Ground Icing 6.4.2 (OP) Operations in Ground Icing

System Criticality: High–(H), Medium–(M), Low–(L)

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Table 10-1-2B. Mapping of Program Elements to Master List of Functions (SAS Approved Numbering) (Continued)

Title 14 CFR Part 135 Helicopter Air Ambulance (HAA) (Peer Group E)

1.0 Organizational Management	2.0 Flight Operations	3.0 Operational Control	4.0 Technical Operations	5.0 Onboard Operations	6.0 Ground and Station Operations
1.1 Safety Programs (H) 1.1.2 (OP) Safety Program (Ground and Flight) 1.1.3 (AW) CASS 1.1.4 (AW) Reliability Program 1.1.6 (AW) Safety Program **1.2 Operations Management (L)** 1.2.1 (OP) Part 119 Required Personnel 1.2.2 (OP) Manual Management 1.2.3 (OP) Computer-Based Recordkeeping System **1.3 Airworthiness Management (L)** 1.3.1 (AW) Part 119 Required Personnel 1.3.2 (AW) Manual Management	**2.1 Training & Qualification (M)** 2.1.1 (OP) Training of Flight Crewmembers 2.1.2 (OP) Training of Check Airmen and Instructors 2.1.3 (OP) Simulators/Training Devices 2.1.4 (OP) Outsource Crewmember Training 2.1.5 (OP) Appropriate Airmen/Crewmember Checks & Quals 2.1.6 (OP) Advanced Qualification Program (AQP) 2.1.7 (OP) Flight Crewmember Flight/Duty/Rest Time 2.1.8 (OP) Training of Operations Control Specialists 2.1.9 (OP) Operations Control Specialist Duty/Rest Time **2.2 Aircraft Operations (H)** 2.2.1 (OP) Airmen Duties/Flight Deck Procedures 2.2.2 (OP) Category II & III Ops 2.2.3 (OP) Pilot Operating Limitations/Recent Experience **2.3 Aircraft Equipment (M)** 2.3.1 (OP) Appropriate Operational Equipment	**3.2 Flight Operations Engineering (M)** 3.2.1 (OP) Aircraft Performance Operating Limitations 3.2.2 (OP) Use of Approved Areas, Routes, and Airports 3.2.3 (OP) Special Navigation Areas of Operation **3.3 Flight Planning & Monitoring (H)** 3.3.1 (OP) Operational Control 3.3.3 (OP) Flight/Load Manifest/Weight & Balance Control 3.3.4 (OP) MEL/CDL/NEF Procedures	**4.1 Training & Qualification (L)** 4.1.1 (AW) RII Personnel 4.1.2 (AW) Maintenance Certificate Requirements 4.1.3 (AW) Maintenance/RII Training Program **4.2 Maintenance Planning and Monitoring (H)** 4.2.1 (AW) Maintenance/Inspection Requirements 4.2.2 (AW) Maintenance/Inspection Schedule 4.2.3 (AW) AD Management 4.2.4 (AW) Recordkeeping 4.2.5 (AW) Maintenance Control Functions **4.3 Maintenance Operations (H)** 4.3.1 (AW) Airworthiness Release/Maintenance Log Requirements 4.3.2 (AW) RII 4.3.3 (AW) MEL/CDL/NEF and Other Deferred Maintenance 4.3.4 (AW) Major Repairs & Alterations **4.4 Technical Administration (L)** 4.4.1 (AW) Special Flight Permits 4.4.2 (AW) MIS/SDR 4.4.3 (AW) Short-term Escalations 4.4.4 (AW) Aircraft Acceptance Process 4.4.5 (AW) Weight & Balance Program **4.5 Maintenance Facilities/Providers (M)** 4.5.1 (AW) Maintenance Facility/Main Maintenance Base 4.5.2 (AW) Maintenance Providers 4.5.3 (AW) Line Stations **4.6 Maintenance Special Requirements (M)** 4.6.1 (AW) Avionics Special Emphasis Programs 4.6.2 (AW) Maintenance Special Emphasis Programs **4.7 Maintenance Tools & Parts Control (M)** 4.7.1 (AW) Control of Calibrated Tools & Test Equipment 4.7.2 (AW) Aircraft Parts/Material Control	**5.2 Cabin Operations (M)** 5.2.1 (OP) Crewmember Duties/Cabin Procedures 5.2.2 (OP) Carry-on Baggage Program 5.2.4 (OP) Passenger Handling	**6.1 Training & Qualification (M)** 6.1.1 (OP) Training of Station Personnel 6.1.2 (OP) Hazardous Material Training Program **6.2 Ground Handling (M)** 6.2.1 (AW) Fueling 6.2.4 (OP) Line Station Operations/Ground Personnel Duties **6.3 Cargo Acceptance & Handling (H)** 6.3.1 (OP) Carriage of Cargo 6.3.2 (OP) Hazardous Materials 6.3.3 (AW) Cargo Handling Equipment Systems & Appliances 6.3.4 (AW) Carriage of Cargo **6.4 Operations in Ground Icing Conditions (M)** 6.4.1 (AW) Operations in Ground Icing 6.4.2 (OP) Operations in Ground Icing

Subsystem Criticality: High–(H), Medium–(M), Low–(L)

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Table 10-1-2B. Mapping of Program Elements to Master List of Functions (SAS Approved Numbering) (Continued)

Title 14 CFR Part 145 Repair Stations Within U.S. (Peer Group F)

1.0 Organizational Management (L)	2.0 Flight Operations	3.0 Operational Control	4.0 Technical Operations (M)	5.0 Onboard Operations	6.0 Ground and Station Operations
1.1 Safety Programs 1.1.6 (AW) Safety Program **1.4 Repair Station Management** 1.4.1 Personnel Records 1.4.2 Certificate Requirements 1.4.3 Manuals 1.4.4 Quality Control System			**4.1 Training & Qualification** 4.1.4 Training and Qualifications **4.2 Maintenance Planning and Monitoring** 4.2.6 Technical Data 4.2.7 Air Carrier and Air Operator Requirements 4.2.8 Domestic European Aviation Safety Agency (EASA) **4.3 Maintenance Operations** 4.3.6 Maintenance Process 4.3.7 Work Away from Station **4.4 Technical Administration** 4.4.6 Record Systems **4.5 Maintenance Facilities/Providers** 4.5.4 Housing and Facilities 4.5.5 Contract Work–Certificated 4.5.6 Contract Work–Noncertificated **4.7 Maintenance Tools & Parts Control** 4.7.3 Tools and Equipment 4.7.4 Parts and Materials		

System Criticality: High–(H), Medium–(M), Low–(L)

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Table 10-1-2B. Mapping of Program Elements to Master List of Functions (SAS Approved Numbering) (Continued)

Title 14 CFR Part 145 Repair Stations Outside U.S. Without Aviation Safety Agreement (Peer Group G)

Title 14 CFR Part 145 Repair Stations Outside U.S. With Aviation Safety Agreement (Peer Group H)

1.0 Organizational Management (L)	2.0 Flight Operations	3.0 Operational Control	4.0 Technical Operations (M)	5.0 Onboard Operations	6.0 Ground and Station Operations
1.1 Safety Programs 1.1.6 (AW) Safety Program **1.4 Repair Station Management** 1.4.1 Personnel Records 1.4.2 Certificate Requirements 1.4.3 Manuals 1.4.4 Quality Control System			**4.1 Training & Qualification** 4.1.4 Training and Qualifications **4.2 Maintenance Planning and Monitoring** 4.2.6 Technical Data 4.2.7 Air Carrier and Air Operator Requirements **4.3 Maintenance Operations** 4.3.6 Maintenance Process 4.3.7 Work Away from Station **4.4 Technical Administration** 4.4.6 Record Systems **4.5 Maintenance Facilities/Providers** 4.5.4 Housing and Facilities 4.5.5 Contract Work–Certificated 4.5.6 Contract Work–Noncertificated **4.7 Maintenance Tools & Parts Control** 4.7.3 Tools and Equipment 4.7.4 Parts and Materials		

System Criticality: High–(H), Medium–(M), Low–(L)

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Table 10-1-2B. Mapping of Program Elements to Master List of Functions (SAS Approved Numbering) (Continued)

All Peer Groups

1.0 Organizational Management	2.0 Flight Operations	3.0 Operational Control	4.0 Technical Operations	5.0 Onboard Operations	6.0 Ground and Station Operations
1.1 Safety Programs 1.1.2 (OP) Safety Program (Ground and Flight) 1.1.3 (AW) CASS 1.1.4 (AW) Reliability Program 1.1.6 (AW) Safety Program **1.2 Operations Management** 1.2.1 (OP) Part 119 Required Personnel 1.2.2 (OP) Manual Management 1.2.3 (OP) Computer-Based Recordkeeping System **1.3 Airworthiness Management** 1.3.1 (AW) Part 119 Required Personnel 1.3.2 (AW) Manual Management 1.3.3 (AW) CASE **1.4 Repair Station Management** 1.4.1 (AW) Personnel Records 1.4.2 (AW) Certificate Requirements 1.4.3 (AW) Manuals 1.4.4 (AW) Quality Control System	**2.1 Training & Qualification** 2.1.1 (OP) Training of Flight Crewmembers 2.1.2 (OP) Training of Check Airmen and Instructors 2.1.3 (OP) Simulators/Training Devices 2.1.4 (OP) Outsource Crewmember Training 2.1.5 (OP) Appropriate Airmen/Crewmember Checks & Quals 2.1.6 (OP) Advanced Qualification Program (AQP) 2.1.7 (OP) Flight Crewmember Flight/Duty/Rest Time 2.1.8 (OP) Training of Operations Control Specialists 2.1.9 (OP) Operations Control Specialist Duty/Rest Time **2.2 Aircraft Operations** 2.2.1 (OP) Airmen Duties/Flight Deck Procedures 2.2.2 (OP) Category II & III Ops 2.2.3 (OP) Pilot Operating Limitations/Recent Experience **2.3 Aircraft Equipment** 2.3.1 (OP) Appropriate Operational Equipment	**3.1 Training & Qualification** 3.1.1 (OP) Training and Qualifications of Dispatchers and Flight Followers 3.1.2 (OP) Dispatcher Duty/Rest Time **3.2 Flight Operations Engineering** 3.2.1 (OP) Aircraft Performance Operating Limitations 3.2.2 (OP) Use of Approved Areas, Routes, and Airports 3.2.3 (OP) Special Navigation Areas of Operation 3.2.4 (OP) RVSM Authorization **3.3 Flight Planning & Monitoring** 3.3.1 (OP) Operational Control 3.3.2 (OP) Dispatch/Flight Release 3.3.3 (OP) Flight/Load Manifest/Weight & Balance Control 3.3.4 (OP) MEL/CDL/NEF Procedures 3.3.5 (OP) Extended Operations (ETOPS)	**4.1 Training & Qualification** 4.1.1 (AW) RII Personnel 4.1.2 (AW) Maintenance Certificate Requirements 4.1.3 (AW) Maintenance/RII Training Program 4.1.4 (AW) Training and Qualifications **4.2 Maintenance Planning and Monitoring** 4.2.1 (AW) Maintenance/Inspection Requirements 4.2.2 (AW) Maintenance/Inspection Schedule 4.2.3 (AW) AD Management 4.2.4 (AW) Recordkeeping 4.2.5 (AW) Maintenance Control Functions 4.2.6 (AW) Technical Data 4.2.7 (AW) Air Carrier and Air Operator Requirements 4.2.8 (AW) Domestic European Aviation Safety Agency (EASA) **4.3 Maintenance Operations** 4.3.1 (AW) Airworthiness Release/Maintenance Log Requirements 4.3.2 (AW) RII 4.3.3 (AW) MEL/CDL/NEF and Other Deferred Maintenance 4.3.4 (AW) Major Repairs & Alterations 4.3.5 (AW) ETOPS 4.3.6 (AW) Maintenance Process 4.3.7 (AW) Work Away from Station **4.4 Technical Administration** 4.4.1 (AW) Special Flight Permits 4.4.2 (AW) MIS/SDR 4.4.3 (AW) Short-term Escalations 4.4.4 (AW) Aircraft Acceptance Process 4.4.5 (AW) Weight & Balance Program 4.4.6 (AW) Record Systems **4.5 Maintenance Facilities/Providers** 4.5.1 (AW) Maintenance Facility/Main Maintenance Base 4.5.2 (AW) Maintenance Providers 4.5.3 (AW) Line Stations 4.5.4 (AW) Housing and Facilities 4.5.5 (AW) Contract Work–Certificated 4.5.6 (AW) Contract Work–Noncertificated **4.6 Maintenance Special Requirements** 4.6.1 (AW) Avionics Special Emphasis Programs 4.6.2 (AW) Maintenance Special Emphasis Programs **4.7 Maintenance Tools & Parts Control** 4.7.1 (AW) Control of Calibrated Tools & Test Equipment 4.7.2 (AW) Aircraft Parts/Material Control 4.7.3 (AW) Tools and Equipment 4.7.4 (AW) Parts and Materials	**5.1 Training & Qualification** 5.1.1 (OP) Training of Flight Attendants 5.1.2 (OP) Flight Attendant Duty/Rest Time **5.2 Cabin Operations** 5.2.1 (OP) Crewmember Duties/Cabin Procedures 5.2.2 (OP) Carry-on Baggage Program 5.2.3 (OP) Exit Seating Program 5.2.4 (OP) Passenger Handling	**6.1 Training & Qualification** 6.1.1 (OP) Training of Station Personnel 6.1.2 (OP) Hazardous Material Training Program **6.2 Ground Handling** 6.2.1 (AW) Fueling 6.2.4 (OP) Line Station Operations/Ground Personnel Duties **6.3 Cargo Acceptance & Handling** 6.3.1 (OP) Carriage of Cargo 6.3.2 (OP) Hazardous Materials 6.3.3 (AW) Cargo Handling Equipment Systems & Appliances 6.3.4 (AW) Carriage of Cargo **6.4 Operations in Ground Icing Conditions (M)** 6.4.1 (AW) Operations in Ground Icing 6.4.2 (OP) Operations in Ground Icing

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 1 GENERAL

Section 3 Safety Assurance System: Roles and Responsibilities

10-1-3-1 GENERAL.

A. Purpose. The purpose of this section is to provide an overview of a Safety Assurance System (SAS) user's roles, responsibilities, and qualifications. This overview is not an all-inclusive list, but provides a summary of tasks or functions related to SAS.

B. Scope. This section applies to all SAS users.

10-1-3-3 RESERVED.

10-1-3-5 BACKGROUND. All users of SAS must use and maintain the system in accordance with the policies and procedures defined in this section.

A. Office of the Executive Director, Flight Standards Service.

1) Provides the national policy and procedures for SAS.

2) Provides national policy and procedures for baseline training and staffing standards.

3) Provides adequate resources to support SAS processes.

B. Safety Analysis and Promotion Division.

1) Designs, develops, and deploys national systems for certification, surveillance, and resolution of safety issues for air operators and air agencies.

2) Provides the policy and guidance on Flight Standards internal and external Safety Management System (SMS) requirements and interfaces.

3) Provides National Safety Analysis (NSA) and program support for the SAS process, to include:

- Performance of risk analysis associated with identified national-level safety hazards;
- Developing recommendations and strategies to address national-level hazards and risks;
- Providing aggregated reporting of SAS data to support decision making at the office and national levels;
- Developing recommendations as appropriate for SAS business process improvement; and
- Evaluating the effectiveness of existing risk controls.

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4) Collects feedback through the SAS Assistance, Feedback, or Enhancement (SAFE) process, completes changes and updates for all SAS processes, and assesses SAS process effectiveness.

5) Maintains both internal and external broadcast messages to SAS users.

6) Continually improves the SAS process using Quality Management System (QMS) work instructions.

7) Provides support to end users.

8) Provides subject matter experts (SME) to support SAS.

9) Selects a national SAS Administrator.

C. How to Request Safety Analysis and Promotion Division Assistance. The Safety Analysis and Promotion Division provides a variety of assistance for many different areas and functions. The assistance could include initial certification, major changes to your operation, adding a new make/model aircraft, SAS automation support, or SAFE information. The following provides guidance for how to request Safety Analysis and Promotion Division assistance:

1) For assistance with adding a new make/model aircraft, see Volume 10, Chapter 11, Section 1, Subparagraph 10-11-1-5B, Safety Analysis and Promotion Division Notification.

2) For assistance with a Title 14 of the Code of Federal Regulations (14 CFR) part 121 initial certification, see Volume 2, Chapter 3.

3) For Field Support Program Office (FSPO) assistance, to include automation support for 14 CFR parts 135 and 145 initial certifications, contact your office liaison. They will contact the Field Support coordinator for your office.

4) For assistance on how to request a National/Divisional Custom Data Collection Tool (C DCT) or to include National/Divisional instructions in an En Route inspection or random inspection (RI), see Volume 10, Chapter 1, Section 2. National/Divisional instructions are initiated from Flight Standards directors or divisions including, but not limited to, the Air Transportation Division, Aircraft Maintenance Division, and General Aviation and Commercial Division. The instructions will include special emphasis items or data that needs to be collected on national or divisional initiatives.

5) For System Approach for Safety Oversight Program Office (SASOPO) support, submit your requests to 9-AWA-AFS-900-SASO@faa.gov.

6) For questions regarding your SAFE submission, submit your request to 9-AFS-900-SAFE@faa.gov.

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7) For all other assistance, please submit your request to AFS-900-Management-Team@faa.gov. In the subject line, add "Need Assistance," and in the body of the email, describe what kind of assistance you are looking for. A Safety Analysis and Promotion Division representative will contact you in 1 or 2 business-days.

D. Offices of Air Carrier Safety Assurance and General Aviation Safety Assurance.

1) Participate as stakeholders in the development and continuous improvement of SAS.

2) Work with the Safety Analysis and Promotion Division to ensure SAS Data Collection Tools (DCT) align with national policy.

3) Provide information on special emphasis items associated with safety hazards and risks. This information is used in the development of National/Divisional C DCTs and can be added to the National En Route inspection and RI templates (see Volume 10, Chapter 1, Section 2).

E. Workforce Development Division. Budgets for and provides the training that meets the needs of SAS users.

F. Safety Risk Management Division.

1) Reports directly to the Office of the Executive Director, Flight Standards Service.

2) Audits compliance with SAS policy and procedures and evaluates the effectiveness of SAS processes.

G. Assigned SAS Administrator and Security Auditor. The SAS Administrator is an appointed position throughout the Flight Standards Service at the national (Safety Analysis and Promotion Division) and office levels. The SAS Administrator provides SAS users authorized access and user roles based on their job function. The SAS Administrator is responsible for deactivating internal users and deleting accounts of external users who no longer require access to SAS.

1) To move a user from one office to another, you must accomplish the following steps in this order:

a) You will need to ensure the user's new office location is updated in the Enhanced Flight Standards Automation System (eFSAS) before you update the information in SAS automation. (Refer to the eFSAS User Manual for information on how to update inspector data.)

b) In SAS, select "User Administration" and locate the user's previous office. Select the user's name and add the new office code from the drop-down menu. You will also be required to add the Office Manager (OM) and the Frontline Manager (FLM). Once you update the information in SAS, the information will automatically update in eFSAS. (Refer to the SAS Automation User Guide (AUG) for information on "User Administration" functions.)

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2) As the office-level SAS Administrator and Security Auditor, you will:

a) Be delegated by the OM.

b) Use the SAS Access Request Form link located under the SAS External Portal button of the SAS Resource Guide (SRG) to request the authorized office-level Security Auditor.

c) Receive SAS Administrator training.

d) Manage all user accounts at the office level.

e) Maintain required fields in User Profiles: home office, physical location (airport), the airport representative of the SAS user's duty location, technical discipline, and specialty. (See Volume 10, Chapter 4, Section 1, Subparagraph 10-4-1-9B7), Leveraging Resources, for a list of available technical disciplines and specialties.)

f) Create user accounts in the external portal system.

g) Review monthly audit reports in the automation, to include: Login History, Unsuccessful Login Attempt, and User Account Change reports.

h) Receive emails when Federal Aviation Administration (FAA) security detects any suspicious activity.

i) Notify the Information Technology (IT) Program Manager or National Service Desk of suspicious activity and then follow the steps in the AUG.

3) As the national SAS Administrator and Security Auditor, you will:

a) Receive SAS Administrator training.

b) Manage all user accounts at the national level.

c) Review monthly audit reports in the automation to include: Login History, Unsuccessful Login Attempt, and User Account Change reports.

d) Receive emails when FAA security detects any suspicious activity.

e) Notify the IT Program Manager or National Service Desk of suspicious activity and then follow the steps in the AUG.

H. Office Point of Contact (POC). The SAS Office POC is an appointed position throughout the Flight Standards Service at the office level. External user requests are directed to the SAS POC. The Office POC can approve the request that will add the user to SAS. SAS POCs need to coordinate with certificate holders' or applicants' principal inspectors (PI) to verify external user requests for access to SAS automation prior to authorizing external users.

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NOTE: For individuals located in an office without a SAS POC, use the SAS Access Request Form link located under the SAS External Portal button of the SRG to request access to SAS automation for individuals in an office that do not have a SAS POC.

I. Office Provisioning Point of Contact (POC). The Provisioning POC is unique to each office and approves access of authorized users to FAA applications, including the external portal. The OM designates the Provisioning POC who will have access to the FAA provisioning portal. Use the SAS Access Request Form link located under the SAS External Portal button of the SRG to request the authorized Office Provisioning POC.

CAUTION: Anyone with internet access can request a SAS External Portal user ID. The automation does not validate the association to the certificate for each individual requesting a user ID. Each office is responsible for authorizing and managing these user IDs. This will ensure only valid representatives of the certificate holder are registered for the SAS External Portal. The certificate holder must develop a method to notify the appropriate Flight Standards office when a user should no longer have access to the SAS External Portal.

J. Office Manager (OM).

1) Ensures office personnel have proper training and full knowledge of their role in SAS.

2) Ensures office personnel effectively execute their assigned SAS responsibilities in accordance with established processes and procedures.

3) Manages the certification projects and certificates for the office's assigned certificate holder(s).

4) Determines and requests staffing, and requests baseline training to support SAS processes. Receives input from the PI and identifies other training needs for office personnel.

5) Participates in the annual planning review, monitors and tracks the progress of the development of the Comprehensive Assessment Plan (CAP), and concurs with the plan.

6) Ensures that personnel under their supervision participate in the annual planning or quarterly process.

7) Ensures the CAP is planned and assigned in resource order unless a justification is provided to support not assigning in resource order.

8) Ensures that the certification project manager (CPM) or PI uses the tools and procedures found in this order.

9) Obtains and provides resources to support the work plan to include travel funding.

10) Concurs with the plan.

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11) Assigns an OM, FLM, or other individual as a proxy to perform duties when needed. Such assignments are not meant to be permanent and shall be effected in accordance with any applicable law, the FAA Personnel Management System, Human Resources Policy Manual (HRPM) EMP-1.15, temporary internal assignments, and labor agreements.

12) Selects an office-level SAS Administrator and Security Auditor.

13) Approves RIs and En Route inspections.

K. Frontline Manager (FLM).

1) Assigns aviation safety inspector (ASI) resources based on resource order first.

2) Provides leadership, support, and resources to ensure that personnel are properly trained and have met the SAS baseline training requirements.

3) Ensures that personnel complete assigned tasks effectively in accordance with established SAS processes and procedures.

4) Concurs with the work plan for parts 135 and 145.

5) Assigns work plans.

6) Supports the geographic program.

7) Holds personnel accountable to conduct assigned work plans according to the specific inspection instructions.

8) Monitors observations, decisions, and actions reported in the automation so that they accurately reflect and support ASI and PI observations.

9) Provides necessary leadership to resolve differences of opinion between reporting ASIs and persons performing Data Quality Reviewer (DQR) functions.

10) Ensures the office roster is maintained and SAS user profiles accurately reflect the Specialty, Technical Discipline, and Physical Location (Airport) fields of office personnel.

11) Ensures the SAS make, model, and series (M/M/S) tables are maintained.

12) Approves RIs and En Route inspections.

13) Performs the function of DQR, as required.

14) Assigns an OM, FLM, PI, or other individual as a proxy to perform duties when needed. Such assignments are not meant to be permanent and shall be effected in accordance with any applicable law, the FAA Personnel Management System, HRPM EMP-1.15, temporary internal assignments, and labor agreements. For more information on proxy assignments, refer to the AUG.

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L. Certification Project Managers (CPM) or Principal Inspectors (PI). The CPM is responsible for the initial certification process, and the PI is responsible for the certificate management process.

1) Both the CPM and PI may perform the following functions:

a) Review a certificate holder's or applicant's request for new or changed scope of operation and, if accepted, adjust the Certificate Holder Operating Profile (CHOP), as required. The adjusted CHOP will produce the scoped DCTs needed to cover the change. The PI/CPM is required to enter data into Module 1, Configuration, if the external portal is not used.

b) Collect and organize information to complete an applicant or certificate holder assessment, solicit input from team members, and make decisions about oversight requirements.

c) Update the configuration data in Module 1.

d) Prioritize SAS System or Subsystem Performance Assessments (SPA) by following SAS planning procedures.

e) Determine retargeting of oversight activities based on analysis of data or significant changes in the operating environment. Significant changes include, but are not limited to, financial distress, labor unrest, or changes in the scope and scale of operations/ratings (e.g., growth or downsizing) that may affect the certificate holder's or applicant's ability to balance resources, size, and organizational structure with operational requirements. Other examples are accidents, incidents, or occurrences that could affect a certificate holder and result in a change to oversight activities.

f) Participate in periodic meetings with the applicant or certificate holder to stay informed on financial health and growth plans, or other conditions that might cause an imbalance between resources and operations.

g) Provide specific instructions, as needed, for completing inspections using the planning procedures.

h) Monitors ASI observations, decisions, and actions reported in the automation so that they accurately reflect and support ASI observations.

i) Seek Operations Research Analyst (ORA) assistance in compiling safety concerns for risk analysis. Communicate analytical needs frequently to the ORA. Include the ORA in discussions or meetings of safety-related issues.

j) Determine if the applicant's or certificate holder's program and processes meet the standards for acceptance or approval.

k) Determine the appropriate action for the results of SPAs, Element Performance Assessments (EPA), Element Design Assessments (EDA), Essential Maintenance Providers (EMP), and C DCTs through the Analysis, Assessment, and Action (AAA).

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l) Recommend resources.

m) Evaluate data in the AAA and determine if there is sufficient data to make an assessment.

n) After coordination with the OM or FLM, the PI or CPM may select a PI, an assistant PI, or an ASI as a proxy in the automation. The proxy would then be able to perform the same functions as the PI or CPM in various places of the automation. Such assignments are not meant to be permanent and shall be effected in accordance with any applicable law, the FAA Personnel Management System, HRPM EMP-1.15, temporary internal assignments, and labor agreements. For more information on proxy assignments, refer to the AUG.

2) The CPM or PI may perform the following functions, as appropriate:

a) The CPM ensures all certification job functions are complete. The CPM communicates project status to the Certification Project Team (CPT) and the appropriate Flight Standards office manager.

b) The PI is responsible for identifying new hazards.

c) PIs may meet at least annually with their FLM and ORA to determine analytical needs. Discussion topics for this meeting include type of reports, frequency, and timing of ORA products.

d) PIs use the analysis and assessment process to make informed decisions about the certificate holder's or applicant's operating systems (1) before approving or accepting them when required to do so by regulations, and (2) during recurring Performance Assessments (PA). They take appropriate actions based on their analysis and assessment, and monitor progress using the Action Item Tracking Tool (AITT).

e) The PI ensures certificate holder regulatory compliance and system adequacy through recurring assessments.

M. Operations Research Analyst (ORA).

1) Serves as the focal point for analytical support.

a) Analyzes and summarizes safety data collected to support the Planning and Assessment Modules.

b) Integrates information from a variety of internal and external data sources for developing long-term safety trends relevant to the office personnel.

c) Applies various analytical techniques to assist in clarifying safety issues.

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2) Understands system safety and risk management (RM) concepts.

a) Possesses a broad knowledge of system safety and the role of certification, surveillance, compliance, and enforcement functions.

b) Understands the key components of RM to assist in evaluating effectiveness.

3) Is familiar with automation tools and software applications.

a) Is skilled at data retrieval techniques to gather safety data.

b) Is familiar with data reporting approaches for presenting analytical results.

c) Navigates the SAS automation and understands its various components.

4) Participates in meetings and discussions, and maintains an open dialogue with office members to meet analytical needs.

N. Aviation Safety Inspector (ASI).

1) Participates in the planning activities to develop the CAP.

2) Schedules, coordinates, and accomplishes the work assignments using SAS tools. ASIs may work individually or as part of a team when conducting a DCT.

3) Accurately and promptly enters data collection results into the automation in accordance with data quality guidelines (DQG).

4) Completes and submits a Dynamic Observation Report (DOR) for an unfavorable observation of performance that is unplanned or is not associated with the planned surveillance. These observations are incidental to other work assignments.

5) Reevaluates returned inspection records and decides on the appropriate action (e.g., edit the record, conduct additional data collection, or take no action).

6) Promptly identifies unsafe conditions or possible regulatory violations observed during data collection, notifies the appropriate personnel, and makes appropriate entries into data systems (e.g., Program Tracking and Reporting Subsystem (PTRS) or SAS automation).

7) Follows established procedures to assist PIs in determining that the applicant or certificate holder complies with its procedures and meets its established performance measures.

8) Performs reviews of data that fall within scope of expertise.

9) Supports PIs and performs tasks associated with the risk management process (RMP) and/or identifying new hazards, as assigned.

10) Conducts geographic inspections.

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11) Prepares for data collection.

12) Conducts RIs and ad hoc En Route inspections, as approved.

O. Team Coordinator (TC). The TC organizes and coordinates the team activities and determines how to distribute the questions among the team members. The TC ensures team members accurately answer the questions and completes the DCT on time.

P. Geographic Resource.

1) Completes and submits a DOR for an unfavorable observation of performance that is unplanned or is not associated with the planned surveillance. These observations are incidental to other work assignments.

2) Completes geographic assigned tasks and enters data collection results accurately and promptly into the automation in accordance with DQGs.

3) Reevaluates returned inspection records and decides on the appropriate action (e.g., editing the record, conducting additional observations, or taking no action).

4) Promptly identifies unsafe conditions or possible regulatory violations observed during data collection. Notifies appropriate personnel and makes appropriate entries into FAA data systems.

5) Conducts data collection, as assigned.

Q. Aviation Safety Technicians (AST) and Aviation Safety Assistants (ASA).

1) ASTs and ASAs who enter assessment data on behalf of the ASI need to ensure they enter the data completely and accurately into the SAS automation.

2) ASTs can provide technical support to an ASI when there is research and documentation involved with the data collection process (e.g., DCTs, input into the Certificate Holder Assessment Tool (CHAT), RMPs, AITT) when assigned by their FLM. However, like ASIs, the ASTs must have the appropriate training.

R. SAS Training Requirements. A list of SAS training course details and position-specific training courses are found in the SRG under the Training button. The electronic Learning Management System (eLMS) is the official training site for courses, prerequisites, and FAA completion transcripts.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 1 GENERAL

Section 4 Safety Assurance System: Acronyms, Abbreviations, Terms, and Definitions

10-1-4-1 GENERAL.

A. Purpose. This section provides a list of Safety Assurance System (SAS) acronyms, abbreviations, terms, and definitions.

B. Scope. This section provides an overview of the SAS acronyms and abbreviations in Table 10-1-4A, Acronyms and Abbreviations, and terms and definitions in Table 10-1-4B, Terms and Definitions.

Table 10-1-4A. Acronyms and Abbreviations

Acronym/Abbreviation	Description
AAA	Analysis, Assessment, and Action
AC	Advisory Circular
ACCD	Aircraft Configuration Control Document
AICD	Aircraft Interior Configuration Document
AIPO	Analysis and Information Program Office
AITT	Action Item Tracking Tool
AQP	Advanced Qualification Program
ASA	Aviation Safety Assistant
ASAP	Aviation Safety Action Program
ASI	Aviation Safety Inspector
ASI-AD	Aviation Safety Inspector—Aircraft Dispatcher
ASI-CS	Aviation Safety Inspector—Cabin Safety
AST	Aviation Safety Technician
ATS	Air Transportation Supervisor
AUG	Automation User Guide
AW	Airworthiness (Avionics/Maintenance)
AXH	Office of Hazardous Materials Safety
BASA	Bilateral Aviation Safety Agreement
C DCT	Custom Data Collection Tool
CAP	Comprehensive Assessment Plan
CASS	Continuing Analysis and Surveillance System

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Acronym/Abbreviation	Description
CAST	Commercial Aviation Safety Team
CFR	Code of Federal Regulations
CHAT	Certificate Holder Assessment Tool
CHEP	Certificate Holder Evaluation Process
CHOP	Certificate Holder Operating Profile
CIPO	Continual Improvement Program Office
COS	Continued Operational Safety
CPD	Certification Process Document
CPM	Certification Project Manager
CPT	Certification Project Team
CSOP	Certification Services Oversight Process
CTL	Certification Team Leader
DA	Design Assessment
DCT	Data Collection Tool
DEPM	Data Evaluation Program Manager
DOR	Dynamic Observation Report
DQG	Data Quality Guidelines
DQR	Data Quality Reviewer
EASA	European Aviation Safety Agency
ED DCT	Element Design Data Collection Tool
EDA	Element Design Assessment
EFIS	Electronic Flight Information System
EMP	Essential Maintenance Provider
EP DCT	Element Performance Data Collection Tool
EPA	Element Performance Assessment
ETOPS	Extended Operations
eVID	Enhanced Vital Information Database
FAA	Federal Aviation Administration
FLM	Frontline Manager
FOIA	Freedom of Information Act
FOQA	Flight Operations Quality Assurance
GEO ADD	Geographic Airport Data Display

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Acronym/Abbreviation	Description
HAA	Helicopter Air Ambulance
Hazmat	Hazardous Materials
HM FLM	Hazardous Materials Frontline Manager
HMDM	Hazardous Materials Division Manager
HMFO	Hazardous Materials Field Office
HMPI	Hazardous Materials Principal Inspector
HMSP	Hazardous Materials Safety Program
HSI	Hazardous Materials Safety Inspector
ICAO	International Civil Aviation Organization
IEP	Internal Evaluation Program
ILT	Instructor-Led Training
IWP	Individual Work Plan
MCPD	Major Change Process Document
MIP	Maintenance Implementation Procedures
MLF	Master List of Functions
MP C DCT	Maintenance Provider Custom Data Collection Tool
NIIM	National Inspection and Investigation Manual
NSA	National Safety Analysis
OM	Office Manager
OpSpecs	Operations Specifications
ORA	Operations Research Analyst
PA	Performance Assessment
PHI	Principal Hazardous Materials Inspector
PI	Principal Inspector
POC	Point of Contact
PTRS	Program Tracking and Reporting Subsystem
QID	Question ID
RBDM	Risk-Based Decision Making
RDL	Required Document List
RI	Random Inspection
RM	Risk Management
RMP	Risk Management Process

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Acronym/Abbreviation	Description
RNA	Resources Not Available
RTR	Returns the Request
RWL	Resource Work List
SA	Safety Assurance
SAFE	SAS Assistance, Feedback, or Enhancement
SAS	Safety Assurance System
SASO	System Approach for Safety Oversight
SAT	System Analysis Team
SDR	Service Difficulty Report
SME	Subject Matter Expert
SMS	Safety Management System
SP DCT	System or Subsystem Performance Data Collection Tool
SPA	System or Subsystem Performance Assessment
SPAS	Safety Performance Analysis System
SRG	SAS Resource Guide
SRM	Safety Risk Management
SRR	Specific Regulatory Requirement
TC	Team Coordinator
TL	Team Leader
U.S.C.	United States Code
VDRP	Voluntary Disclosure Reporting Program
WBT	Web-Based Training

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Table 10-1-4B. Terms and Definitions

Term	Definition
Acceptable Risk	The level of risk that individuals or groups are willing to accept, given the benefits gained. Each organization will have its own acceptable risk level, which is derived from its legal and regulatory compliance responsibilities, its threat profile, and its business/organizational drivers and impacts.
Action Item Tracking Tool (AITT)	The AITT is a repository that provides access/manages functionality on all of the action items created for any given certificate holder. The AITT includes action items created from various modules in Safety Assurance System (SAS) automation, such as the Analysis, Assessment, and Action (AAA), the Certificate Holder Assessment Tool (CHAT), Data Collection, and the AITT itself. The AITT does not replace documentation requirements specified in other guidance.
Applicant	An individual, group, or organization seeking new operating authority.
Assessment (in relation to Performance Assessment (PA) or Design Assessment (DA))	An item that the principal inspector (PI)/certification project manager (CPM) schedules or plans on the Comprehensive Assessment Plan (CAP). An assessment is created to evaluate the certificate holder's or applicant's process and procedures. Assessments include System or Subsystem Performance Data Collection Tools (SP DCT), Element Performance Data Collection Tools (EP DCT), Element Design Data Collection Tools (ED DCT), Custom Data Collection Tools (C DCT), random inspections (RI) (Ramp), and En Route inspections.
Authoring Tool	The authoring tool is an application used by the Safety Analysis and Promotion Division to sustain and continuously improve Data Collection Tools (DCT).
Authority Attribute	A clearly identifiable, qualified, and knowledgeable person who has authority to effectively plan, direct, and control resources; change procedures; and make key determinations, including safety risk acceptance decisions.
Avionics Special Emphasis Programs	Accepted or approved programs to the certificate holder/applicant's maintenance program requiring specific emphasis and procedures to ensure compliance with the associated regulations and guidance. These programs include: Cockpit Voice Recorders, Flight Data Recorders, Air Traffic Control (ATC) Transponder, Lower Landing Minimums, Reduced Vertical Separations Minimums, Aircraft Network Security Program, and Electrical Wiring Interconnection Systems.
Baseline Interval	The baseline interval is the criticality value of the assessment (high, medium, or low).

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Term	Definition
Bilateral Aviation Safety Agreements (BASA)	BASAs provide for technical cooperation between the Federal Aviation Administration (FAA) and other civil aviation authorities (CAA).
Bundling (in reference to planning assessments)	Grouping specific assessments together regardless of criticality for better resource management.
Compliance Action	Action taken by Flight Standards personnel (not the certificate holder) to: • Correct an airman/organization/noncertificated person's deviation from regulatory standards when the deviation was not a result of intentional, reckless, or criminal behavior, or a pattern of negative behaviors or performance; or • Communicate safety hazards, risks, concerns, or recommendations.
Certificate Holder Assessment Tool (CHAT)	The CHAT is an automated tool for each certificate holder and specialty that contains a series of risk indicators and PI options that help the PI assess risk. The output of the CHAT will assist the PIs to justify changes in resource order on the CAP.
Certificate Holder Evaluation Process (CHEP)	A standardized process to evaluate Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 145 certificate holders. A CHEP can be conducted at the office, divisional, or national level.
Certificate Holder Maintenance Provider	An individual whom the certificate holder has identified for the responsibility for the accomplishment of any of its maintenance, preventive maintenance, or alterations.
Certificate Holder Operating Profile (CHOP) (also known as the operating profile)	The main purpose of the operating profile is to generate a specific set of DCTs used to conduct PAs and DAs. The operating profile is developed from configuration data taken from the enhanced Vital Information Database (eVID) and operations specifications (OpSpecs), as well as questions that must be answered by the PIs/CPMs. The operating profile represents a certificate holder/applicant's scope of operations. The output of the operating profile is scoped data collection questions.
Certificated Repair Station (CRS)	Part 145 repair station.
Certification Project Manager (CPM)	Primary FAA spokesperson throughout the SAS initial certification process. The CPM is responsible for ensuring that all certification job functions are complete.
Certification Project Team (CPT)	Responsible for the oversight functions of an initial certification.

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Term	Definition
Comprehensive Assessment Plan (CAP)	The CAP is a tool used for planning, documenting, and tracking assessments. The PIs/CPMs use the CAP to schedule and adjust resource order and due dates of assessments, and to record the reasons for making those adjustments. The CAP is a 2-year plan.
Configuration Data	A set of unique characteristics or attributes that define the certificate holder's or applicant's scope of operation. For example, route structure, fleet type, fleet size, domestic vs. international operations, and Extended Operations (ETOPS) are types of configuration data.
Continued Operational Safety (COS)	Routine recurring PAs (routine surveillance through safety inspections). Also includes certificate management, the management of major changes in operation (i.e., system configuration change).
Contract Maintenance	Any maintenance, preventive maintenance, or alterations accomplished by a certificate holder maintenance provider.
Controls Attribute	Developing and maintaining the need for, and adequacy of, new or revised risk controls into a process to ensure mitigation of unacceptable risk.
Custom Data Collection Tool (C DCT)	Both a PI C DCT and a National/Divisional C DCT can be used for focused inspections, special emphasis oversight, and to collect data on specific areas of concern outside of the normal planning schedule. If data needs to be collected on functions not covered by EP DCTs and ED DCTs, then a National/Divisional C DCT template will need to be created. A PI can create a C DCT to include: • Both scoped and unscoped questions. • Design questions. • Performance questions. A PI cannot create a C DCT to: • Combine design and performance questions, or • Combine Airworthiness and Operations questions. C DCTs created by PIs have the option of going through the AAA. A template C DCT consists of questions for focused inspections. C DCTs created from a template will automatically go through the AAA.
Data Collection Tools (DCT)	Tools designed to collect data to help the PI/CPM determine if a certificate holder or applicant follows procedures, controls, and process measurement for each element. Includes: SP DCTs, EP DCTs, ED DCTs, C DCTs, and En Route and Ramp inspections.
Data Quality Guidelines (DQG)	Guidelines that help determine acceptable levels of data quality during the evaluation of inspection records.

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Term	Definition
Data Quality Reviewer (DQR)	An individual who is designated for reviewing DCT reports and records to ensure they meet DQGs. This automation function is held by a Frontline Manager (FLM) and can be delegated to the data evaluation program manager (DEPM) or other assigned person.
Due Date	The required or expected completion date for assessments or DCTs.
Dynamic Observation Report (DOR)	The DOR is used to record an unfavorable observation of performance outside the planned oversight process. A DOR has two options: Question-Based or "No Applicable Questions."
Element	An element refers to the groupings per subsystem that characterize the components of that system.
Element Design Assessment (EDA)	The SAS function that measures a certificate holder/applicant's operating systems at the element level for compliance with the full intent of regulations and system safety, including the requirement to provide service at the highest level of safety in the public interest.
Element Performance Assessment (EPA)	The SAS function that measures a certificate holder/applicant's operating systems at the element level to confirm that the certificate holder is following its procedures and producing the intended result.
En Route Inspection	An inspection of the in-flight operations of a certificate holder within the operational environment of the air transportation system. Requires management approval.
Essential Maintenance Provider (EMP)	An EMP is any person with whom a part 121 or 135 certificate holder has made arrangements for the accomplishment of any of its on-wing maintenance or alterations designated as Required Inspection Items (RII).
External Portal	The external portal is a secured, user-friendly, web-based system that allows the PI/CPM and the certificate holder or applicant to exchange information and populate the SAS automation.
Frontline Manager (FLM)	FLMs provide first-level supervision to subordinate employees and manage the activities of one operating unit, project, or program area. FLMs report to middle or senior managers.
Geographic Resource	A geographic resource is an aviation safety inspector (ASI) that is not included on the office roster that can be requested by a PI or CPM to conduct planned or unplanned data collection. The process to request a geographic resource is described under Resource Sharing in Volume 10, Chapter 4, Section 1, subparagraph 10-4-1-9C7).

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Term	Definition
Hazard	A hazard is defined as a condition that could foreseeably cause or contribute to an aircraft accident as defined in Title 49 of the Code of Federal Regulations (49 CFR) part 830, § 830.2.
Hazardous Materials (Hazmat)	A substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under Title 49 of the United States Code (49 U.S.C.) § 5103. The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous in the Hazardous Materials Table (refer to 49 CFR part 172, § 172.101), and materials that meet the defining criteria for hazard classes and divisions in 49 CFR part 173.
Identified Risk	A level of risk that is identified through various analysis techniques.
Identify New Hazard (Request NSA Support)	A new hazard is identified as one where the associated risk is not adequately controlled by current directives, or risk controls do not exist to effectively mitigate risk (e.g., in the case of new technology). The hazard may be a systemic or a potentially systemic safety issue that may apply to multiple certificate holders.
Individual Work Plan (IWP)	A rolling plan documenting the risk-prioritized DA and PA activities for each ASI. The IWP includes estimates of resources necessary to complete each activity and includes other ASI activities, such as training and office duties.
Interfaces Attribute	Interactions between processes that must be managed in order to ensure desired outcomes.
Maintenance Implementation Procedures (MIP)	The procedural document authorized by the BASA related to the performance of maintenance, alterations, and modifications on civil aeronautical products. This document defines the process for reciprocal acceptance of each authority's recommendations for certification, renewal, and acceptance of eligible repair stations and maintenance organizations.
Maintenance Special Emphasis Programs	Accepted or approved programs applicable to the certificate holder/applicant's maintenance program requiring specific emphasis and procedures to ensure compliance with the associated regulations and guidance. These programs include: Aging Airplane Inspections, Repair Assessment for Pressurized Fuselages, Damage Tolerance Assessment of Repairs to Pressurized Fuselages, Fatigue Critical Structure (FCS) Inspections, Electrical Wiring Interconnection Systems (EWIS), Fuel Tank System Maintenance Program, Limit of Validity, and Flammability Reduction Means.

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Term	Definition
Master List of Functions (MLF)	A list of functions that a part 121, 135, or 145 certificate holder or applicant could perform.
Mitigate	An action needed to reduce the level of risk.
Monitor	An action plan to keep under systematic review. Observe and check the certificate holder/applicant's progress or quality over a period of time.
National Safety Analysis (NSA)	A key foundational component of SAS, NSA is a national-level function providing analytical support to identify new systemic hazards or safety issues within the extended aviation community overseen by the Flight Standards Service, assess adverse trends in safety performance, and evaluate the effectiveness of existing safety risk controls.
National/Divisional C DCT	A template C DCT that consists of questions for focused inspections. The National Program Office Branch's Continual Improvement Program Office (CIPO) Technical Support Team (TST) develops a National/Divisional C DCT based on a request from the Office of Air Carrier or General Aviation Safety Assurance or the Office of Safety Standards. The National/Divisional C DCT can include questions currently found in existing DCTs and/or custom questions. A custom question is one that is created for the C DCT and not currently in a DCT. A National/Divisional C DCT created from a template will automatically go through the AAA.
Off-Hour	Activities that occur outside of normal FAA duty hours, including weekends.
Office Roster	The automation provides a roster that lists all of the certificates and the office personnel. When FLMs assign work, they can select from any of the office personnel listed on the roster, regardless of the certificate.
Operating Profile (also known as Certificate Holder Operating Profile (CHOP))	OpSpecs and eVIDs create an operating profile, which is a tailored list of systems/subsystems, elements, and questions that are applicable to a certificate holder/applicant's scope of operation. The PI/CPM can modify the profile if the certificate holder or applicant has a unique situation that results in differences from the standard configuration, such as a deviation or exemption.
Operational Risk	A risk indicator that has the potential to affect the operations of the certificate holder.
Operations Research Analyst (ORA)	Responsible for assisting the office personnel in collecting and analyzing certificate holder or applicant data.
Operations Specifications (OpSpecs)	Legal and binding contract between a certificate holder and the FAA that documents specifically how the certificate holder operation is conducted.

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Term	Definition
Organizational Risk	A risk indicator that has the potential to affect the organizational and environmental factors of the certificate holder.
Outsourcing	The practice of contracting internal certificate holder programs, processes, and traditional certificate holder functions to external independent vendors, suppliers, and contractors, such as maintenance, training, and ground handling. Oversight for the quality of the overall process remains with the certificate holder.
Peer Group A	All part 121 certificate holders.
Peer Group B	Part 135 – 10 or more seats.
Peer Group C	Part 135 – 9 or less seats.
Peer Group D	Part 135 – 9 or less single pilot only.
Peer Group E	Part 135 helicopter air ambulance (HAA).
Peer Group F	Part 145 located within the U.S.
Peer Group G	Part 145 located outside the U.S. without Aviation Safety Agreement.
Peer Group H	Part 145 located outside the U.S. with Aviation Safety Agreement.
Performance History	The results of the certificate holder's operations over time.
Performance Measure	A description of the desired outcome of a certificate holder element process. It is used to determine whether the desired results of that process were achieved.
Planning Cycle	The term "cycle" is used to distinguish the planning differences between part 121 and parts 135 and 145. The planning cycle for part 121 is quarterly; for parts 135 and 145, the planning cycle is annually.
Preapplication Statement of Intent (PASI)	The completed PASI is a document used in initial certification that denotes intent by the applicant to initiate the certification process and allows the FAA to plan activities and prepare to commit resources.
Principal Inspector (PI)	The PI is the primary FAA spokesperson and decision maker for their specialty in all applications of SAS.
Procedures Attribute	Methods or practices including checks and restrains that are written or unwritten and regulatory or nonregulatory, designed into a process that a certificate holder/applicant uses to accomplish a desired result. "Unwritten methods" refers to certificate holders/applicants that are not required by regulation to have documented procedures.
Process	Policies and procedures designed to produce a desired result or end product for a certificate holder.

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Term	Definition
Process Measurement Attribute	Monitoring and measuring the outputs and safety performance of a process and identifying problems, or potential problems, in order to take corrective action.
Proxy	This allows a person to perform the SAS functionality of another person in the automation. See Volume 10, Chapter 1, Section 3 for more information.
Random Inspections (RI) (Ramp)	Planned or unplanned ramp inspections, with authorization. Supports the Geographic Airport Data Display (GEO ADD) tool and Public Law (PL) 111-216, Airline Safety and Federal Aviation Administration Extension Act of 2010.
Resource Work List (RWL)	Located in Module 3, Resource Management. The RWL displays the rows for the DCTs to which the FLM/Office Manager (OM) can assign (or recommend, in the case of the PI/CPM).
Responsibility Attribute	A clearly identified person who is responsible for ensuring financial and human resources to ensure the safety and quality performance of a process.
Risk	The combination of predicted severity and the likelihood of the potential effect of a hazard.
Risk Analysis	The injury and damage potential of events related to hazards regarding the likelihood of occurrence and severity of resulting consequences.
Risk Assessment	The process by which the results of risk analysis are used to make decisions.
Risk Control	To reduce or eliminate the effects of hazards.
Risk Factors	Risk factors identify what must be controlled to reduce the level of risk.
Risk Indicator	Conditions that may create hazards in the certificate holder's systems.
Risk Management (RM)	The process composed of describing the system, identifying the hazards, and analyzing, assessing, and controlling risk.
Risk Severity Values	High—Loss (or breakdown) of an entire system or subsystem; accident or serious incident. Medium—Potential moderate damage to an aircraft, partial breakdown of a certificate holder system, or a violation of regulations or company rules. Low—Potential poor certificate holder performance or disruption of the carrier's operations.
Risk-Based Decision Making (RBDM)	Building on safety management principles to proactively address emerging safety risk by using consistent, data-informed approaches to make smarter, system-level, risk-based decisions.

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Term	Definition
Safety	The state in which the risk of harm to persons or property damage is acceptable.
Safety Assurance (SA)	Processes within a Safety Management System (SMS) that function systematically to ensure the performance and effectiveness of safety risk controls and that the organization meets or exceeds its safety objectives through the collection, analysis, and assessment of information.
Safety Assurance System (SAS)	SAS is the Flight Standards oversight of parts 121, 135, and 145 certificate holders and applicants.
Safety Attributes	The qualities of a system (e.g., Authority, Responsibility, Procedures, Controls, Process Measurement, Interfaces, and Safety Ownership) that should be present in a well-designed certificate holder system and process.
Safety Management System (SMS)	The formal, top-down, organization-wide approach to managing safety risk and ensuring the effectiveness of safety risk controls. It includes systemic procedures, practices, and policies for management of safety risk.
Safety Objective	A measurable goal or desirable outcome related to safety.
Safety Ownership Attribute	The measure of understanding an individual has of how his or her performance of safety-related duties contributes to the safety performance of the element.
Safety Performance	Realized or actual safety accomplishments relative to the organization's safety objectives.
Scalability	Scalability allows us to tailor and scope the operating profile to each certificate holder's unique operation. This is accomplished through the use of peer groups and configuration data, which results in scoped DCTs.
Scope of Operation	Description of a certificate holder/applicant's authorized activities in air commerce.
Scoped DCT	A DCT created using a process that filters available questions to include only those that apply to a specific certificate holder/applicant.
Standard DCT	There are three types of standard DCTs: SP DCT, EP DCT, and ED DCT. Each standard DCT in SAS aligns with a specific MLF label.
Subsystem	The groupings per system that characterize the major operations within that system.

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Term	Definition
System	An integrated set of elements that are combined in an operational or support environment to accomplish a defined objective. These elements include people, hardware, software, firmware, information, procedures, facilities, services, and other support facets. For the purposes of SAS, the six systems are defined as the following: 1.0 Organizational Management, 2.0 Flight Operations, 3.0 Operational Control, 4.0 Technical Operations, 5.0 Onboard Operations, and 6.0 Ground and Station Operations.
System Analysis Team (SAT)	A team that includes participants from the FAA, the certificate holder, other FAA organizations, and other non-FAA entities (e.g., the manufacturer) to accomplish further analysis and determine root causes of system deficiencies.
System Approach	The structured, safety-driven means by which the FAA certifies and conducts oversight activities on elements that are designed to interact predictably within the certificate holder's systems and subsystems.
System Safety	The application of special technical and managerial skills to identify, analyze, assess, and control hazards and risks associated with a complete system. System safety is applied throughout a system's entire life cycle to achieve an acceptable level of risk within the constraints of operational effectiveness, time, and cost.
System Stability	A state of constant balance of safety resulting from a certificate holder's ability to effectively manage aspects of their organization and environment (those they control directly and those over which they have no direct control).
Systemic	Design/performance issues affecting one or more systems in a similar manner and magnitude. Also known as constant error.
Tailoring	Tailoring applies to the DAs and PAs to determine which DCTs are used for a particular assessment.
Team Coordinator (TC)	The TC organizes and coordinates the team activities. The TC monitors the SP, ED, EP, and C DCTs for accuracy and completeness.
Technical Operations	Those functions associated with aircraft maintenance, including: Training and Qualification, Maintenance Planning and Monitoring, Maintenance Operations, Technical Administration, Maintenance Facilities/Providers, Maintenance Special Requirements, and Maintenance Tools and Parts Control.

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Term	Definition
Transfer	To reassign the risk to another FAA entity that has the authority to address the risk.
Unacceptable Risk	Risk that cannot be tolerated by the managing activity. It is a subset of identified risk that must be eliminated or controlled.

10-1-4-3 through 10-1-4-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 2 CONFIGURATION

Section 1 Safety Assurance System: Module 1 Configuration

10-2-1-1 GENERAL. The certificate holder or applicant defines its scope of operations and develops core processes, procedures, and programs for Federal Aviation Administration (FAA) approval or acceptance. The scope of operations enables the FAA to develop a Certificate Holder Operating Profile (CHOP) for a particular certificate holder or applicant. This operating profile allows the principal inspector (PI) or certification project manager (CPM) to plan and conduct oversight activities that are specific to the certificate holder or applicant's scope of operation.

NOTE: Security is an important feature of the Safety Assurance System (SAS) automation. If a SAS user detects a security breach or there is an indication of a security risk, he or she should immediately notify the office SAS Security Auditor or SAS Administrator. See Volume 10, Chapter 1, Section 1, Subparagraph 10-1-1-5I, Security Risks, for more information.

A. Purpose. There are three events that can trigger a change request to the configuration process: an initial certification, an FAA-initiated change, or a certificate-holder-initiated change. The outcome of this process is a final operating profile.

B. Scope. This section applies to the PI/CPM. In Module 1, Configuration, the PI/CPM will:

- Assist the certificate holder or applicant with the application process,
- Review the application package for accuracy and completeness,
- Accept or reject the submission,
- Review and update the operating profile, and
- Finalize the operating profile.

10-2-1-3 RESERVED.

10-2-1-5 BACKGROUND.

A. Configuration Process. The configuration process provides a method for the PI/CPM to document a change request to the certificate holder's scope of operations. The configuration process interfaces with data from operations specifications (OpSpecs), enhanced Vital Information Databases (eVID), and configuration data to populate the operating profile. "Vitals" is a tab used in the SAS automation that includes environmental data from eVID.

B. External Portal. The SAS external portal is a secure, user-friendly, web-based system that allows the PI/CPM and the certificate holder or applicant to exchange information and populate the SAS automation. The certificate holder or applicant can use the SAS external portal to submit data. The PI is notified of certificate holder configuration change requests as they are submitted through the SAS external portal. The use of the SAS external portal is mandatory for new applicants. Existing certificate holders are encouraged to use the SAS

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external portal. If the certificate holder or applicant cannot access the portal due to extenuating circumstances, then the change/application requests will be coordinated with the PI/CPM. Use of the external portal is not mandatory for Peer Group H certificate holders and applicants; it may conflict with the existing Bilateral Aviation Safety Agreement (BASA). Refer to the SAS External Portal User's Guide for information on how to register for access to the SAS external portal.

1) CHOP. The main purpose of the operating profile is to generate a specific set of Data Collection Tools (DCT) used to conduct Performance Assessments (PA) and Design Assessments (DA). The operating profile is developed from configuration data taken from eVID, OpSpec, and "SAS-only" data in the form of questions that the PI/CPMs must answer. The operating profile represents a certificate holder's or applicant's scope of operations. The output of the operating profile is a tailored list of system, subsystem, and elements with their associated data collection questions. Having an accurate CHOP is essential to developing a comprehensive work program that is tailored to the certificate holder's or applicant's scope of operations.

NOTE: When the PI/CPM selects OpSpecs from the configuration data, those are the proposed OpSpecs for that configuration change. The PI/CPM will need to update the OpSpecs using the Web-based Operations Safety System (WebOPSS).

2) Validation of Configuration Data. Configuration data consists of OpSpecs, Vitals Information, programs, and/or authorizations. This information is used to record pertinent data about the certificate holder or applicant. It is important that the information be current and accurate because work programs are generated using this data. The certificate holder's Environmental Information still needs to be reviewed and updated annually in eVID. The certificate holder's Vitals Information is reviewed and updated annually in SAS.

NOTE: Under "Configuration Data," "Contractor" tab, Airworthiness PIs can add and maintain contractor data for certificate holders and applicants. Maintenance contractors for Title 14 of the Code of Federal Regulations (14 CFR) parts 121 and/or 135 issued OpSpec D072 can be designated as Essential Maintenance Providers (EMP). If the contractor is an EMP, check the corresponding box and enter the list of Required Inspection Items (RII), for which they are responsible.

3) Inputs From Module 5, Analysis, Assessment, and Action (AAA). SAS is a closed-loop system; therefore, decisions made in Module 5 may require changes to the certificate holder's configuration data in Module 1. For example, if during Module 5 the FAA finds that a certificate holder's existing program is not working, the PI may want to remove that program or make changes in the certificate holder's OpSpecs. These changes are made in Module 1.

C. Configuration Triggers. The following events are triggers that identify the need for the configuration process: an initial certification, an FAA-initiated change, and a certificate-holder-initiated change. Use the certification projects process to document an initial certification. Use the configuration change request to document the approval/acceptance process for an FAA-initiated change and a certificate-holder-initiated change.

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1) Initial Certification. Title 14 CFR part 121, 135, or 145 applications are included within the scope of the Certification Services Oversight Process (CSOP). When an applicant requests authorization to operate under part 121, 135, or 145, CSOP is used to review, accept, and sequence the application using the guidance found in Volume 11, Chapter 13.

NOTE: For changes to certificate status, see Volume 3 and the SAS Automation User Guide (AUG) for additional guidance. Coordination with the Aviation Data Branch may be required.

2) FAA-Initiated Change. The FAA issues or revises a regulation or policy that affects the certificate holder system or its operating authority. As part of an evaluation, the FAA may require the certificate holder to revise one or more of its programs or systems, or modify one or more of its authorizations.

3) Certificate-Holder-Initiated Change. The certificate holder proposes changes to its OpSpecs, programs, or manual revisions. Examples may include:

- Cargo to passenger;
- Supplemental to domestic;
- Adding a new aircraft type;
- Changes to training programs; and/or
- Any other changes that affect the certificate holder's operating environment.

NOTE: The certificate holder or applicant performs Safety Risk Management (SRM) anytime a change occurs or is introduced into the design of the system.

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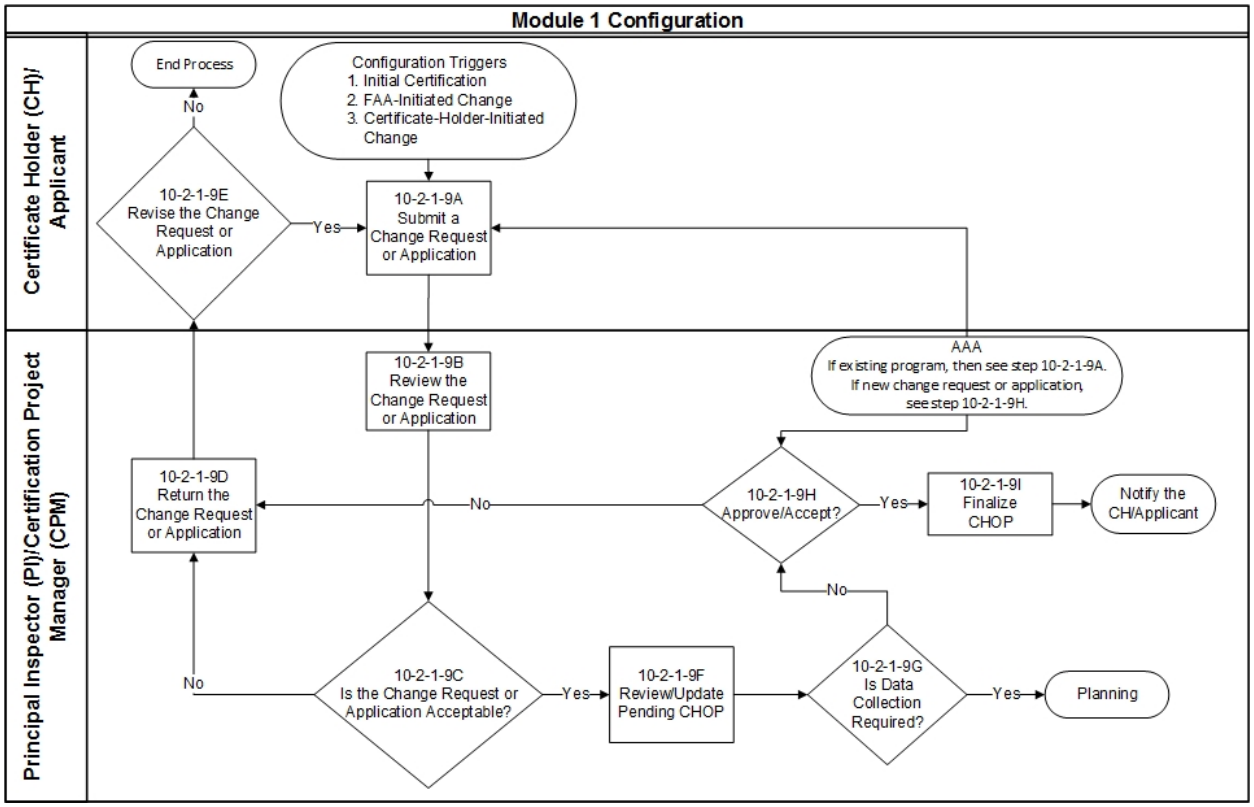
10-2-1-7 CONFIGURATION.

Figure 10-2-1A. Module 1 Configuration Process Flowchart



10-2-1-9 PROCEDURES.

A. Submit a Change Request or Application (see flowchart process step 10-2-1-9A). Configuration change requests allow the PI/CPM to document and evaluate any new or changed scope of operation. Configuration data consists of OpSpecs, Vitals Information, programs, and/or authorizations. The certificate holder should submit a change request or application through the SAS external portal, or the PI/CPM must submit the change request or application. The PI/CPM reviews the change request or application to determine the effect it will have on the certificate holder's system and CHOP. Configuration change requests are created using the standard or streamlined methods.

If the change request is for:	Use the:
Items that change the CHOP such as Vitals daggered symbols, adding or removing OpSpecs, certificate holder renewal, certificate holder scope of operations, and/or when DCTs are required to evaluate the change, the PI must	Standard method.
Changes to configuration data that do not impact the CHOP, such as telephone number and validation date changes, the PI may	Streamlined or standard method.

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NOTE: The streamlined method can be used from the "Configuration Data" tab, "Vitals" tab, or "Operation Specification" tab using the "Edit" function on the bottom of the screen. Using the streamlined method will auto-create the change request and will display as "auto-generated change request" in the change request description. Selecting the "Submit" button on the "Vitals" tab or "Operation Specification" tab will then submit and accept the streamlined change. The status will change to "Final" and the configuration change will be complete.

1) Initial Certification. An applicant for a part 121, 135, or 145 certificate must submit an application package to the appropriate Flight Standards office through the use of the SAS external portal. The applicant will have access to Module 1 for configuration data and to Module 4, Data Collection, Data Reporting, and Data Review, for Element Design DCTs (ED DCT). The Office Manager (OM) is notified of an application as it is submitted through the SAS external portal.

NOTE: The applicant will have to upload a signed Preapplication Statement of Intent (PASI) to the SAS database as part of the formal application.

2) FAA-Initiated Change. The FAA may amend OpSpecs or require program revisions when safety in the public interest requires such action. Amendments or revisions can result from significant changes to the certificate holder's operating environment or safety concerns. If the certificate holder does not use the SAS external portal, the PI must enter the configuration data into the automation with a change request.

3) Certificate-Holder-Initiated Change. The certificate holder should submit the request in letter form or through the use of the SAS external portal. If the certificate holder uses the SAS external portal, they will have access to Module 1 for configuration data and to Module 4 for ED DCTs (if required). The certificate holder must submit documentation for the FAA to evaluate the impact of the change.

a) Although the use of the SAS external portal is not required for existing certificate holders, it is highly recommended. If the certificate holder cannot or does not use the SAS external portal, the PI must enter the configuration data into the automation with a change request.

b) Certificate renewals will be documented using a configuration change request. The PI will add the renewal Custom Data Collection Tool (C DCT) to the configuration change request to document the process.

B. Review the Change Request or Application (see flowchart process step 10-2-1-9B).

1) Certificate Holder Change Request. When the PI receives a request for a new or changed scope of operation, the PI follows the FAA procedures applicable to that request and reviews the change request for content, quality, and if the change request accurately represents the proposed scope of operations. The goal of this review is to determine what effect the change request will have on the certificate holder's system and the operating profile. If applicable, the

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certificate holder should perform the SRM process for any change request and include the documentation for the PI to review.

2) Application Package. When the office receives a request for an application, the office follows the FAA procedures applicable to that request and reviews the application package for content, quality, and if the application accurately represents the applicant's proposed scope of operation. The goal of this review is to determine if the certification process can begin.

C. Is the Change Request or Application Acceptable? (see flowchart process step 10-2-1-9C). If the change request is acceptable, then see Step 10-2-1-9F, Review/Update Pending CHOP. If the application is acceptable, then see Volume 2 for initial certification. (See Figure 10-2-1B, Acceptance of the Change Request or Application Package (Sample Letter).) If the change request or application is not acceptable, then see Step 10-2-1-9D, Return the Change Request or Application.

D. Return the Change Request or Application (see flowchart process step 10-2-1-9D). If the PI/CPM determines the change request or application is unacceptable, the PI/CPM must return the entire change request or application to the certificate holder or applicant stating the reasons why it is returned. See Figure 10-2-1C, Return of the Change Request or Application Package (Sample Letter).

E. Revise the Change Request or Application (see flowchart process step 10-2-1-9E). The certificate holder or applicant reviews the PI's or CPM's comments, makes the appropriate corrections to the change request or application package, and resubmits it. The certificate holder or applicant has the option to withdraw the change request or application. If the change request or application is withdrawn in the automation, then it can only be resubmitted by starting the process over.

F. Review/Update Pending CHOP (see flowchart process step 10-2-1-9F). The PI/CPM reviews the pending operating profile changes to ensure it contains all the systems/subsystems, elements, and questions applicable to the certificate holder's or applicant's change request or application package. If the pending CHOP does not contain the applicable information, then the PI/CPM can update the information.

NOTE: If a request for initial European Aviation Safety Agency (EASA) approval is added as a configuration change for a Peer Group F certificate holder, the PI will update the Vitals Information by selecting "EASA Listed" and entering "PEND" in the "EASA Certificate Number" field, along with the Quality Monitoring System (QMS) contractor information and EASA Accountable Manager. Upon acceptance of the application package and receipt of the EASA part 145 approval, the PI will update the Vitals by replacing "PEND" with the EASA certificate number.

G. Is Data Collection Required? (see flowchart process step 10-2-1-9G). The PI/CPM determines if an Element Design Assessment (EDA) or C DCT is required to evaluate the change request or application package. Once the PI/CPM selects the assessment or C DCT, that assessment or C DCT is automatically added to the Comprehensive Assessment Plan (CAP).

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When the PI/CPM generates the CAP, the EDA will populate in the CAP based on the configuration data. The data collected is evaluated in Modules 4 and 5 before the change can be approved or accepted. If data collection is not required, then see Step 10-2-1-9H, Approve/Accept.

NOTE: Renewal certification is done as a configuration change. The PI must add the C DCT from the configuration change request.

H. Approve/Accept? (see flowchart process step 10-2-1-9H). If the PI/CPM affirms the DA based on the results of Module 5 AAA, then see Step 10-2-1-9I, Finalize CHOP. If the PI/CPM does not affirm the design, then see Step 10-2-1-9D, Return the Change Request or Application.

NOTE: When the PI/CPM approves or accepts the change request or application, the automation does not automatically notify the certificate holder or applicant of this status unless the SAS external portal is used. The PI/CPM may have to follow up with the notification. See Subparagraph 10-2-1-9J, Notify the Certificate Holder or Applicant, for further information.

I. Finalize CHOP (see flowchart process step 10-2-1-9I). After the PI/CPM approves or accepts the change, the operating profile is considered finalized and the Vitals are updated. However, if the change affected a change in OpSpecs, then the PI/CPM will need to update the OpSpec using WebOPSS. Once all the changes have been made, the PI/CPM should validate the changes in the operating profile and the configuration data.

J. Notify the Certificate Holder or Applicant. The PI/CPM can notify the certificate holder or applicant of the approval or acceptance of the change by using the SAS external portal or a letter.

10-2-1-11 THROUGH 10-2-1-13 RESERVED.

10-2-1-15 JOB AIDS.

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Figure 10-2-1B. Acceptance of the Change Request or Application Package (Sample Letter)

[FAA Letterhead]
[Date]

Mr. Rockwell J. Jones
President and CEO, MidSouth Airlines
601 Sky Harbor Blvd.
Little Rock, AR 72202

Dear Mr. Jones:

We reviewed your change request/application package and found it to be acceptable. Our acceptance of the change request/application package does not convey specific approval of the attachments. We will approve or accept the attachments after a detailed evaluation by the Federal Aviation Administration (FAA) team. We look forward to working with you and your team.

Sincerely,

John T. Smith

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Figure 10-2-1C. Return of the Change Request or Application Package (Sample Letter)

[FAA Letterhead]
[Date]

Mr. Rockwell J. Jones
President and CEO, MidSouth Airlines
601 Sky Harbor Blvd.
Little Rock, AR 72202

Dear Mr. Jones:

We reviewed your change request/application package, dated ____. We are returning your change request/application because of the following deficiencies:

- Résumés of Harvey Anderson, Director of Operations (DO), and S.F. Whipley, Director of Maintenance (DOM) were not included in your application.
- The compliance statement is incomplete. For example, you did not address Title 14 of the Code of Federal Regulations (14 CFR) part 121, § 121.XXX, [Subject].
- Your company's general manual attachment describes methods of compliance with this regulatory section, and you should appropriately reference them in the compliance statement. As previously discussed, the compliance statement must address all applicable regulatory sections.
- The minimum equipment list (MEL) does not contain maintenance and operations procedures as required on the Master Minimum Equipment List (MMEL).

You must submit a new application when you have corrected all discrepancies noted above and any other omissions that exist. Please contact us if we can be of any further assistance in clarifying the requirements for your application.

Sincerely,

John T. Smith

10-2-1-17 through 10-2-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 3 PLANNING

Section 1 Safety Assurance System: Module 2 Planning

10-3-1-1 GENERAL. The principal inspector (PI)/certification project manager (CPM) assesses the certificate holder's or applicant's systems and operating environment for indications of hazards. This process helps to highlight risks and identify areas on which to focus attention. The Comprehensive Assessment Plan (CAP) is a tool for planning, documenting, and tracking assessments. The PI/CPM uses the CAP to add assessments and Data Collection Tools (DCT), adjust the resource order, adjust due dates of assessments, and record the reasons for making adjustments. The PI/CPM uses risk indicators in the Certificate Holder Assessment Tool (CHAT) to associate risk to the certificate holder's or applicant's proposed or current operating system.

NOTE: Security is an important feature of the Safety Assurance System (SAS) automation. If a SAS user detects a security breach, or there is an indication of a security risk, he or she should immediately notify the office SAS Security Auditor or SAS Administrator. See Volume 10, Chapter 1, Section 1, Subparagraph 10-1-1-5I, Security Risks, for more information.

A. Purpose. The planning process is used to assess the scope of operation and develop a risk-based, data-supported CAP.

B. Scope. In Module 2, Planning, the PI/CPM will:

- Review and assess planning data;
- Review and update the CHAT;
- Review, adjust, and validate the CAP; and
- Forward the CAP to management for the next process, Module 3, Resource Management.

10-3-1-3 RESERVED.

10-3-1-5 BACKGROUND. SAS encompasses certification, routine surveillance, and certificate management processes for the Federal Aviation Administration (FAA) to perform oversight of certificate holders. It assesses the safety of Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 145 certificate holders' operating systems using system safety principles, Safety Attributes, and risk management (RM). SAS also assesses the requirement to provide service at the highest level of safety in the public interest. Module 2 is used by the PI/CPM to develop a risk-based, data-supported CAP. This plan assists the PI/CPM with decisions about the certificate holder or applicant's compliance with regulations and the design of the programs. Module 2 consists of the CHAT and CAP.

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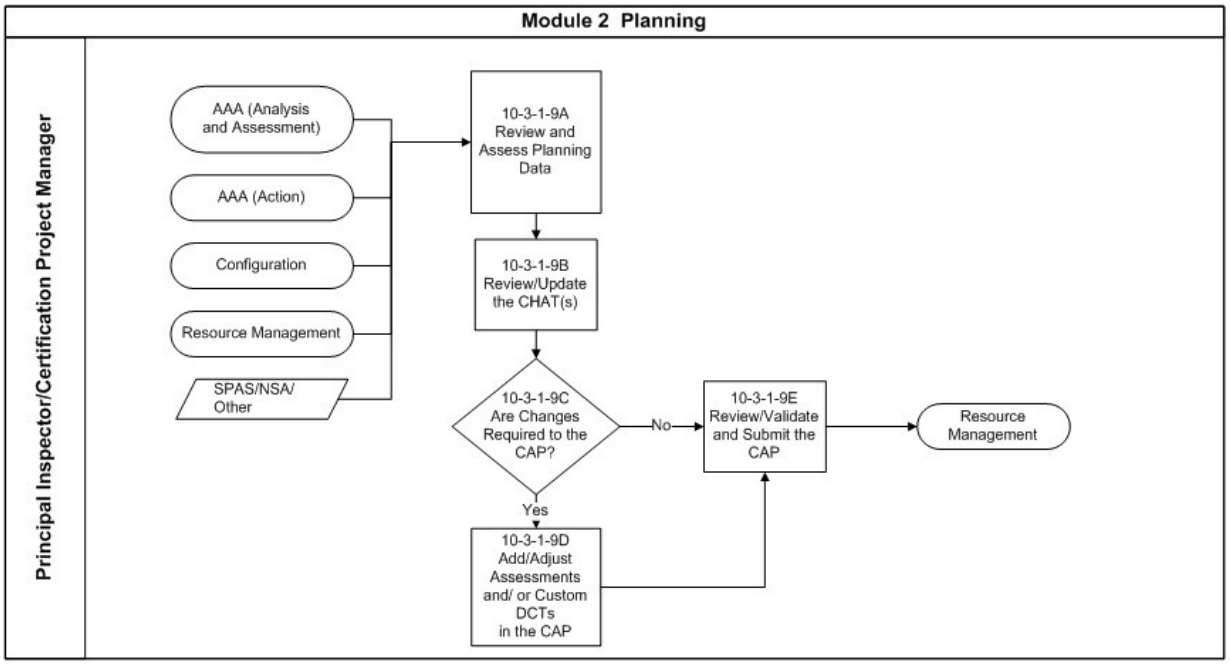
10-3-1-7 PLANNING.

Figure 10-3-1A. Module 2 Planning Process Flowchart



10-3-1-9 PROCEDURES.

A. Review and Assess Planning Data (see flowchart process step 10-3-1-9A). The first step in this process is for the PI/CPM to review and assess the planning data to identify risk in the certificate holder's or applicant's system and operating environment. The review of planning data is conducted quarterly and/or annually depending on the certificate holder or applicant type. The PI/CPM assembles planning data from various sources. The following provides some examples of planning data sources and inputs.

NOTE: The planning cycle is quarterly for part 121 and annually for parts 135 and 145. The cycle frequency distinguishes the difference between part 121 and parts 135 and 145.

1) Inputs to Planning.

a) Analysis and Assessment. The input from the Analysis and Assessment (Module 5) portion of the Analysis, Assessment, and Action (AAA) is used when the PI/CPM determines more data collection is required to make an assessment determination. PIs will use data information acquired through the AAA process to determine input into the planning process.

b) Action. The input from the Action (Module 5) portion of the AAA is used when the PI/CPM determines, based on the assessment results, that change is required to be made to the current risk indicators in the CHAT. After making changes to the CHAT, the PI may make plans for future assessments. The PI should update the CHAT with any newly identified

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risk. If actions have already been addressed in the AAA, the PI may document "No Action Required."

c) Configuration. Input from the configuration helps the PI/CPM plan activities specific to the certificate holder or applicant's new or changed scope of operation.

d) Resource Management. If management does not agree with the PI/CPM's plan, the PI/CPM may need to work with the Frontline Manager (FLM)/Office Manager (OM) to make changes to the plan.

e) Safety Performance Analysis System (SPAS). Provides a detailed data package for the selected element, system, or subsystem that is useful for planning and analysis.

f) National Safety Analysis (NSA). The Safety Analysis and Promotion Division's Analysis and Information Program Office (AIPO) provides national-level analysis which may result in a baseline interval (criticality) of an assessment and/or a National Custom Data Collection Tool (C DCT). AIPO uses the NSA functional analysis to identify new hazards and recommend actions to mitigate the associated risks.

g) Other Sources of Planning Data:

1. Feedback from Team Members. An important source of planning data is feedback from the certificate holder or applicant team. This feedback can be gathered during the planning and/or review meetings.

2. Operations Research Analyst (ORA). The ORA is available to review internal and external data.

3. SAS Reports. SAS reports are available in tableau format to any SAS user from the SAS automation. A list of reports is located in the SAS Automation User Guide (AUG).

4. Program Tracking and Reporting Subsystems (PTRS). PTRS data can provide additional information to help the PI/CPM evaluate planning data.

5. Commercial Aviation Safety Team (CAST) Safety Portfolio. The CAST Safety Portfolio provides information on Safety Enhancements (SE) developed by the CAST. Data shows that CAST SEs, when implemented by the certificate holder, contribute to our goal of the highest level of safety and overall safety strategy to help identify hazards and risk.

a. The CAST Safety Portfolio is provided by the Safety Analytical Services Division (AVP-200). It is located in the SAS Resource Guide (SRG) and is updated periodically. A broadcast message is sent to all SAS users to announce when a new version of the CAST Safety Portfolio is added to the SRG. (Refer to the Office of Inspector General (OIG) Audit Report AV-2014-017, FAA's Safety Data Analysis and Sharing System Shows Progress, but More Advanced Capabilities and Inspector Access Remain Limited.)

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b. Participation in the CAST SE program is voluntary for the certificate holder. Operations Specification (OpSpec) Part S, Voluntary Data Submission, is used to collection voluntary SE reporting (see Volume 3, Chapter 18, Section 12).

c. A part 121 PI must review the CAST Safety Portfolio during the planning meeting, regardless of certificate holder participation, to become familiar with new and existing SEs. To assist with the review, it is recommended that the PI coordinate with an ORA to help determine if there is existing risk. If a certificate holder is not implementing CAST SEs, it may be an indicator of risk in the associated program area. If risk is identified with an SE, then the PI must document the risk in the CHAT by selecting the risk indicator, "Voluntary Programs," and the appropriate action should be taken.

d. System or Subsystem Performance Assessment (SPA) 1.1 (OP) and (AW) Safety Programs will be used to assess and document the certificate holder's application and implementation of the SEs.

6. Safety Risk Management (SRM) and Safety Assurance (SA) Documentation. For applicable certificate holders, the PI/CPM reviews the SRM and SA documentation to ensure the certificate holder is effectively identifying and mitigating risk.

7. Planning for Coordinated Surveillance Report. A link to the report is on the CAP. For part 145 PIs, the report will display assessments planned for Essential Maintenance Providers (EMP) based on their CAP.

8. The Interim Certificate Holder Priority Index (ICPI). An interim tool that evaluates the risk factor and safety performance data for each certificate holder and calculates a numerical score that can be used to compare, rank, and prioritize them for surveillance planning and targeted oversight. High values indicate the presence of conditions that suggest elevated levels of risk. For additional information, refer to the ICPI User Guide that will be linked in the SRG.

9. PI Instructions to Identify Risk for En Route and Random Inspection (RI) C DCTs. Anytime risk is identified that impacts the En Route and/or RI C DCTs, PIs create or update the PI instructions on the template. The PI instructions entered on the En Route and RI C DCT template will be included on both the unplanned (ad hoc) and planned (CAP) C DCT. PIs have the ability to change the PI common instructions and add additional DCT assignment instructions when adding an En Route/RI C DCT to the CAP.

a. To update the template, select the "Manage My PI Custom DCT Templates" tab, then select "En Route" or "Random" from the "DCT Type" drop-down. The PI instructions will be used to identify areas of risk they want observed by any aviation safety inspector (ASI) who conducts En Route inspections or RIs on the certificate holder. For example, if risk has been identified that maintenance items are not properly deferred, the PI would list that question ID (QID) from the En Route or RI national template in the PI instructions. The questions cannot be removed or edited by the PI. The PI may include a header on the template describing the area, such as flight operations, airworthiness, dispatch, and cabin safety operations.

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b. Airworthiness inspectors (principal avionics inspectors (PAI)/principal maintenance inspectors (PMI)) will coordinate and maintain a single En Route and a single Random template with PI instructions. Operations and Airworthiness PIs will maintain separate templates with their own instructions. The following are examples of the methods the PI may use to communicate special emphasis and risk areas through the PI instructions.

i. Example 1: Using the QID number:

- Airworthiness: Please respond to QID #15830.
- Flight Operations: Current and Qualified Pilots: Please respond to QID #15834.

ii. Example 2: PIs may list special emphasis items, risk items, and specific areas that need to be observed:

- Airworthiness: Ensure deferred items are documented in the aircraft log and notated on the dispatch release. Pay special attention to repair interval.
- Flight Operations: Ensure newly qualified pilots are complying with high minimums for takeoff and landing.

2) Annual Planning Review and/or Meeting. Required for parts 121, 135, and 145. The annual planning review may be held in person or virtually. The purpose of the annual planning review is for the PI and office personnel to evaluate the certificate holder's system and operating environment for risks, including the results from coordinated surveillance. The PIs will also coordinate and update the En Route inspection and RI C DCT template(s) with items identified during the annual planning review. This includes a review and update of the CHAT if the certificate holder's risk has changed. Based on the results of the annual planning review, the PI plans the CAP. The annual planning review can be a "rolling" review, which means that the PI can schedule each of his or her certificates at different times during the year as long as each certificate is reviewed at least once per year. Each time the CHAT is updated and submitted, SAS will record the date and change "Annual Review Completed" to "Yes."

3) Quarterly Planning Review. Optional for parts 121, 135, and 145. The quarterly review may be held in person or virtually. The purpose of the quarterly review is for the PI and office personnel to review conditions that may affect the CHAT and CAP. Based on the results of the quarterly planning review, the PI updates the CHAT and the En Route/RI C DCT PI instructions with newly identified risk and adjusts the CAP, as necessary.

B. Review/Update the CHAT(s) (see flowchart process step 10-3-1-9B). Based on the review and assessment of the planning data, the PI/CPM updates the CHAT to reflect the risk identified during the AAA. This is done by selecting the risk indicators and then by selecting the associated PI option(s) (action) to address the risk. If risk indicators are selected, the PI/CPM must select an action and describe the reason for selecting the risk indicator and associated action in the comment text box.

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If the PI:	**Then the PI:**
Identified no risk in the annual review and no previous risk was identified for the certificate holder,	Selects "No Action" and must provide an appropriate explanation. (For example: No additional risk identified during the annual review, and no previous risk was monitored.)
Has not identified any new risk, but has previously identified risk,	Continues to monitor the previous risk in the Action Item Tracking Tool (AITT), selects "Clear" for a new CHAT record, selects "No Action Required," and must provide an explanation. (For example: No additional risk identified during the annual review, previous risk identified is still being monitored during normal surveillance.)
Identified new risk,	Continues to monitor the previous risk in the AITT, selects "Clear" for a new CHAT record to document the new risk and the actions to mitigate, such as conducting additional surveillance or initiating a Risk Management Process (RMP).

NOTE: Clearing the CHAT will not close the previous version history of the risk identified in the CHAT that has not been mitigated. There is an AITT action associated with the previous CHAT record and the PI will document any additional actions or events in the AITT.

1) CHAT. The CHAT is an automated tool containing a list of risk indicators that helps the PI/CPM associate risk to a certificate holder's/applicant's current or proposed operating environment. There is one CHAT for Airworthiness and another for Operations. The CHAT contains a series of risk indicators that help the PI/CPM identify and document conditions that may expose hazards to their operation. At a minimum, the CHAT must be reviewed and updated annually during the planning review/meeting. If the certificate holder has a significant event, such as an accident, the PI should review/update the CHAT with any new risk and/or verify the previously identified risk is still accurate.

NOTE: For an initial certification, the CPM will not use the CHAT until the setup of the initial oversight plan.

2) Complete the CHAT. Having an accurate CHAT is essential to developing a CAP that is tailored to the certificate holder's or applicant's identified risk. When you identify one or more new risks in the CHAT, select the appropriate risk indicators and associated PI action(s) for each identified risk indicator. The CHAT is updated based on the results of Module 5, Analysis, Assessment, and Action (AAA). Module 5 closes the loop in the SAS model. The CHAT is reviewed after the AAA, anytime a change occurs, or at least annually. When the CHAT is submitted, the CHAT version is then updated. The risk indicators and PI options will autopopulate on the AITT once the CHAT is submitted.

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a) Risk Indicators. Risk indicators are groupings of safety- and/or performance-related data that reflect areas of potential risks and help prioritize the CAP. The CHAT contains three risk indicator categories:

1. Performance History. Performance history is the results of the certificate holder's operation over time (see Figure 10-3-1C, CHAT Performance History Risk Indicator and Descriptions by Peer Group).

2. Organizational. Organizational and environmental factors internal to the certificate holder organization, which can be managed to improve system stability and safety (see Figure 10-3-1D, CHAT Organizational Risk Indicator and Descriptions by Peer Group).

3. Operational. Organizational and environmental factors related to the certificate holder operations, which can be managed to improve system stability and safety (see Figure 10-3-1E, CHAT Operational Risk Indicator and Descriptions by Peer Group).

NOTE: "Financial Conditions" and "Rapid Growth or Downsizing": If the PI selects one or both of these two risk indicators, then the PI must use the Financial Condition Assessment Decision Aid and/or the Rapid Growth/Downsizing Assessment Decision Aid located in Volume 6, Chapter 2, Section 18. To document the decision aid results, the PI will add the overall score results in the comment section of the PI Options. For example, the following comment would be added: "Referred to the Rapid Growth/Downsizing Assessment Decision Aid in Volume 6. The overall results are as follows: 8–39, the operator seems to have major rapid growth or downsizing issues and an RMP will be initiated." (Refer to the OIG Audit Report.)

b) PI Options. To evaluate the risk identified in the CHAT, the PI can select actions they would like to take to assess the scope of the risk and determine any mitigation needed. These options include:

PI Options	Description
Add Element Design Assessment(s) (EDA)	Select this option if you want to revalidate the design of an affected program(s), or in certificate management oversight to approve or accept new or changed programs. Additional considerations to determine if this option is necessary would be if the operator exhibits: • Inability to effectively perform a process, which may indicate an issue with the design; • Failure in system controls, including an inability to reduce problems, which may indicate an issue with the design; • Poorly documented procedures; and • Rapid and widespread changes in personnel, procedures, or training that impact the design.

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PI Options	Description
Adjust Priority or Resource Order	Select this option if you want to adjust the priority or resource order of a Performance Assessment (PA) or Design Assessment (DA). More specific considerations to determine if this option is necessary to use would be if the operator exhibits: • Increasing number of events or issues in the same system, subsystem, or element; • Multiple data points in same area(s); • Rapid and widespread changes in personnel, procedures, training, or infrastructure for a system, subsystem, or element; • Inconsistent implementation of a procedure, process, or training within a system, subsystem, or element; and • Perceived difficulty in performance of a system, subsystem, or element.
Add Element Performance Assessment (EPA)	Select this option if you want to target areas of interest. More specific considerations to determine if this option is necessary to use would be if the operator exhibits: • Repeated events in different systems, subsystems, or elements that interface; • Inconsistent implementation of a procedure, process, or training across systems, subsystems, or elements; • Perceived difficulty in performance across systems, subsystems, or elements; and • Broad changes to operations across systems, subsystems, or elements.
Add C DCTs	Select this option if you want to target areas of interest by using a select number of DCT questions. More specific considerations to determine if this option is necessary to use would be if the operator exhibits: • Repeated events in different systems, subsystems, or elements that interface; • Inconsistent implementation of a procedure, process, or training across systems, subsystems, or elements; • Perceived difficulty in performance across systems, subsystems, or elements; • Broad changes to operations across systems, subsystems, or elements; and • A proactive approach to validate contracted maintenance through coordinated surveillance.
Identify New Hazard(s)	Select this option if a new hazard is identified. A new hazard is identified as one where the associated risk is not adequately controlled by current directives or risk controls do not exist to effectively mitigate risk (e.g., in the case of new technology). The hazard may be a systemic or a potentially systemic safety issue that may apply to multiple certificate holders. New hazards should not be deleted and will be tracked in the AITT.
Initiate RMP	Select this option if you want to initiate an RMP for an existing hazard. The PI identifies hazards involving the certificate holder knowingly or unknowingly accepting or generating an undesirable level of safety and there is enough information to assess the risk. The RMP is used to document and track an existing hazard and oversee and evaluate the disposition of the associated risk.
No Action Required	Select when the PI has determined that no action is required. No action is required when the risk has been previously identified and documented and action is being taken.

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3) CHAT Report. The CHAT Report is a list of certificate holder risk indicators and PI options, and is used to update the CAP.

C. Are Changes Required to the CAP? (see flowchart process step 10-3-1-9C). If the PI/CPM determines that, based on the results of the CHAT, changes are required to the CAP, see Step 10-3-1-9D, Add/Adjust Assessments and/or Custom DCTs in the CAP. If the PI/CPM determines that changes are not required, then see Step 10-3-1-9E, Review/Validate and Submit the CAP.

1) What is the CAP? The CAP is a 2-year plan to schedule System or Subsystem Performance Assessments (SPA). The following items may also be planned on the CAP (as needed):

a) EPAs and EDAs. EPAs and EDAs are added or adjusted based on known risks or safety priorities.

b) EMPs.

c) C DCTs, as needed.

d) En Route inspections, as needed.

e) RIs (Ramp), as needed.

2) Part 121/135 CAPs. Each PI/CPM will have a CAP which will include assessments associated with their assigned certificate holders and applicants. Assessments may be shared between Maintenance and Avionics.

3) Part 121/135/145 Airworthiness CAPs. Parts 121, 135, and 145 have only one Airworthiness CAP. That CAP may be shared between Maintenance and Avionics. If one PI makes a change to the due date of an assessment, then it changes the CAP for the other PI. Because the CAP is shared, it is important that both the PMI and PAI coordinate with each other regarding any CAP changes.

4) Certificate Holder Evaluation Process (CHEP) CAP. The CHEP CAP assessments are added to the end of the CAP. Otherwise, it functions like all other CAPs.

5) Initial Certification CAP. The initial certification CAP is placed with the regular CAP. The assessments will not be limited by quarter.

6) How is the CAP Organized? The CAP defaults to criticality, due date, certificate holder or applicant (alpha/numeric), and then the Master List of Functions (MLF) label. The CAP is organized into four groups:

- SPAs, EPAs, and EDAs;
- C DCTs and EMP inspections;
- Initial certification assessments; and
- CHEP assessments.

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D. Add/Adjust Assessments and/or Custom DCTs in the CAP (see flowchart process step 10-3-1-9D). The PI/CPM can add assessments and DCTs, adjust assessment due dates and assessment interval and/or assessment resource order based on the results of the CHAT and other risk-related factors. Assessments can also be generated as a result of data collection, the AAA, a National/Divisional directive, and the AITT. Only action items from configuration and the AAA autopopulate the CAP.

1) Adding an Assessment or DCTs. The PI/CPM needs to determine the number of DCTs necessary to assess the certificate holder's or applicant's performance or design for each assessment, based on risk.

a) SPA, EDA, or EPA. The PI/CPM determines if a team or a single ASI should complete the SPA, EDA, or EPA. All SPAs, EDAs, and EPAs go through the AAA.

b) C DCTs. The PI/CPM can create a C DCT from one specialty (Airworthiness or Operations) and from either PA or DA questions, but not both. Template C DCTs consist of prepopulated questions for focused inspections. C DCTs can be assigned to a team or a single ASI. The National/Divisional C DCT template can be used to create En Route and RI C DCTs. This template allows the PI to communicate special emphasis items to any ASI performing an En Route inspection or RI. If the PI does not create a C DCT template, it will default to the national template. The PI will maintain the PI C DCT for the En Route inspection and RI in the "Manage My PI Custom C DCT Templates" tab of the "Manage My Created DCTs" link on the SAS menu.

NOTE: When creating a C DCT, the PI/CPM can request that the DCT be assessed on its own by choosing "Needs Own Assessment." When the DCT is completed, it becomes available in Module 5 for AAA. If the PI determines that the C DCT does not need its own assessment, the individual questions are included in the AAA the next time the element containing those questions is assessed.

c) RIs (Ramp) and En Route Inspections. The PI/CPM can schedule RIs (Ramp) and En Route inspections using the National/Divisional C DCT template.

d) Analysis. Both planned and ad hoc RIs and En Route inspections will go through the AAA for analysis, but not as individual assessments. The RI and En Route inspection results are populated in the AAA of the appropriate SPA based on the following:

- RIs (OP) and En Routes (OP) for peer groups 121A, 135B, and 135E are linked to Subsystem 2.2, Aircraft Operations (OP), for the purposes of performing assessments.
- RIs (OP) and En Routes (OP) for peer groups 135C and 135D are linked to System 2.0, Flight Operations (OP), for the purposes of performing assessments.

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- RIs (AW) and En Routes (AW) for peer groups 121A, 135B, and 135E are to be linked to Subsystem 4.3, Maintenance Operations (AW), for the purposes of performing assessments.
- RIs (AW) and En Routes (AW) for peer groups 135C and 135D are to be linked to System 4.0, Technical Operations (AW), for the purposes of performing assessments.

NOTE: RIs (Ramp), En Route inspections, and Dynamic Observation Reports (DOR) cannot be assigned to a team.

2) PI/CPM Considerations When Adding an Assessment and/or C DCT.

a) Risk Assessment. The PI/CPM identifies and evaluates known or perceived risks and plans the appropriate assessments to address those risks. An example may include maintenance-provider-coordinated surveillance. A PI/CPM may plan a combination of assessments and DCTs, such as adding additional DCTs to an SPA or selecting the option to add a specific EPA from within the System or Subsystem Performance Data Collection Tool (SP DCT). If the PI/CPM chooses to do this, there are many ways to approach this.

NOTE: The automation defaults to one assessment on the CAP.

NOTE: For maintenance-provider-coordinated surveillance, see Volume 6, Chapter 2, Section 40.

b) Public Law (PL) 111-216, Airline Safety and Federal Aviation Administration Extension Act of 2010 (formally known as H.R. 5900). The term “random inspection” (RI) is the result of PL 111-216 and it supports on-demand work. An RI is an onsite inspection of air carriers that provide air transportation pursuant to a contract with a part 121 air carrier, to ensure such air carriers are complying with all applicable safety standards of the administration (refer to PL 111-216).

c) Geographic Resource (Geographic Airport Data Display (GEO ADD) Tool). One way a PI can determine if a geographic resource is needed is based on the results of a Geographic Review (GEO ADD Tool). The PI should review the GEO ADD Tool annually by the end of the fiscal year (FY).

d) PI Instructions. If the PI/CPM has instructions that apply to each of the DCTs in an assessment, they can provide common PI instructions that will be attached to all DCTs. If they have specific instructions that apply to individual DCTs in an assessment, the specific instructions can be added to the individual DCT. These instructions may call out specific training programs, fleets, or inspection and maintenance programs the PI/CPM is focusing on during the assessment. PI instructions assist the ASI in determining focus areas while collecting data. Instructions will also assist the FLM in determining resource assignments. The PI/CPM may change the instructions prior to the DCT being submitted for data review.

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1. Make, Model, and Series (M/M/S). Should the PI/CPM determine that data is needed to be collected on a specific M/M/S, he or she should include the specific information in the M/M/S selection.

2. Location. When the PI enters a location in the DCT, the ASI is required to complete the inspection at that specific location.

3. En Route and RI C DCTs. PI instructions are used to communicate special emphasis items to be observed, specific to a certificate holder. PI instructions will determine the minimum number of questions to be answered for the DCT.

3) Resource Recommendation. The PI/CPM recommends individuals or teams by selecting the name from a drop-down list. If the PI is the only individual providing oversight, then the automation defaults to the PI. The PI/CPM can consider grouping specific assessments together regardless of criticality for better resource management.

NOTE: RIs related to "GEOADD" and PL 111-216 requirements should include instructions to the ASI to enter "GEOADD" or "PL 111-216," without quotes or spaces, and in capital letters, in the "Local/Regional/National Use" field in the RI common data field.

4) Adjustment. The following are reasons the PI/CPM may need to adjust the assessment due date or baseline interval on the CAP. If a CAP adjustment does occur, a justification may be required.

- The results of the CHAT indicate a change is needed;
- New elements added because of major changes to the certificate holder's or applicant's operations;
- Results of the AAA;
- Result of unassigned work from the previous planning cycle;
- Resolution of issues raised during CAP concurrence;
- The addition of PI instructions for completing the DCT;
- Geographic program requirements;
- National/Divisional C DCT; and/or
- Realign assessment dates (bundling).

5) Due Dates and Resource Order. The PI/CPM should consider factors that may affect the assessment due dates and resource order (see Figure 10-3-1B, Baseline Intervals by Peer Group, and Table 10-3-1A, Intervals, Due Date, and Resource Order Definitions).
If necessary, adjust either the resource order or the due date and include an explanation when the assessment is moved outside of the baseline interval. Some examples include:

- A planned change to a program in a future quarter;
- National guidance that directs a focused inspection;
- NSA inputs; and
- Part 135 or 145 certificate holders not exercising the privileges of their certificates.

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NOTE: PIs assigned to part 135 or 145 certificate holders that are not exercising the privileges of those certificates (e.g., due to government contract requirements) may move the baseline performance assessments out 12 months. If the certificate becomes active, the PIs should adjust the baseline as applicable.

Figure 10-3-1B. Baseline Intervals by Peer Group

Part	Peer Group	Certificate Holder Description	System Performance Assessment Intervals		
			System/Subsystem Criticality = High	System/Subsystem Criticality = Medium	System/Subsystem Criticality = Low
121	**A**	All Part 121 Certificate Holders	6 months	12 months	24 months
135	**B**	10 or more seats	6 months	12 months	24 months
	C	9 or less seats	N/A	12 months	24 months
	D	9 or less seats—single pilot only	N/A	12 months	24 months
	E	Helicopter Air Ambulance (HAA)*	6 months	12 months	24 months
145	**F**	Within the U.S.	N/A	12 months	24 months
	G	Outside U.S. without Aviation Safety Agreement	N/A	12 months	24 months
	H	Outside U.S. with Aviation Safety Agreement	SAS automation does not schedule an SPA for Peer Group H. The PI/CPM must schedule a C DCT for a certificate renewal.		

* Air ambulance (fixed-wing) operators with operations specification (OpSpec) A024 may be in Peer Group A, B, C, or D.

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Table 10-3-1A. Intervals, Due Date, and Resource Order Definitions

Baseline Interval	The baseline interval is the criticality value of the assessment (high, medium, and low). The PI/CPM can move a medium criticality above a high, or a low above a medium or high. Any vertical movement requires justification. The PI may shorten the interval based on need.
Adjusted Interval	An adjusted interval is when the PI/CPM changes the baseline interval to a shorter interval for a specified period of time. An adjustment cannot be made until the first assessment is complete.
Criticality	NSA establishes the criticality. Criticality is the likelihood that a failure of a certificate holder's or applicant's system, subsystem, or element could lead to an unsafe condition. • High criticality. A high likelihood that a failure in the certificate holder's or applicant's system, subsystem, or element could lead to an unsafe condition. • Medium criticality. A moderate likelihood that a failure in the certificate holder's or applicant's system, subsystem, or element could lead to an unsafe condition. • Low criticality. A low likelihood that a failure in the certificate holder's or applicant's system, subsystem, or element could lead to an unsafe condition. Criticality helps define the next due date or baseline interval. Review system level on the MLF for criticality and see Figure 10-3-1B, Baseline Intervals by Peer Group.
Due Date	The default due date for all planned assessments is the last day of the quarter. The due date is the same as the baseline date, unless the PI makes an adjustment based on CHAT results or other factors.
Resource Order	Resource order is the order in which assessments are planned based on criticality and due dates.
Grace Period	All assessments (including C DCTs) have a 30-calendar-day grace period between the time the due date is exceeded and the time they are considered overdue. The grace period is used for data review and PI decision for the AAA. The grace period begins at midnight the day after an incomplete assessment exceeds its due date. Initial Certification and CHEP assessments will turn red during the grace period but continue to move forward.
Overdue	An assessment is overdue when: • Its grace period has expired (for SPAs); or • It passes its due date (for all others). An assessment becomes overdue at midnight following the last day of its grace period (for SPAs) or due date (for all others).

E. Review/Validate and Submit the CAP (see flowchart process step 10-3-1-9E).

1) Review/Validate the CAP. The PI/CPM reviews the CAP to ensure the information is accurate and that the assessments are balanced throughout the quarters and most importantly, risk-based. For an Airworthiness CAP, the assessments may not appear to be balanced between PMIs and PAIs. Their respective workloads are balanced and risk-based. The PI/CPM can make any final adjustments if necessary.

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2) Submit the CAP for Resource Management. After the PI/CPM validates the CAP, he or she then submits the CAP for resourcing and concurrence. After the CAP is submitted, the PI/CPM should notify the FLM. The automation will send the FLM a notification once the CAP is submitted.

Figure 10-3-1C. CHAT Performance History Risk Indicator and Descriptions by Peer Group

Certificate Holder Performance History Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Accidents/ Incidents/ Occurrences	Data on accidents/incidents/occurrences and the certificate holder's response, corrective action planning, and ongoing followup activities determine this risk indicator's applicability. Accidents/incidents/occurrences may provide insights into areas of risk. Considerations to determine the presence of this risk indicator include: • Repeated events; • Number of events; • Severity of event(s) as defined by Volume 7, Chapter 1, Sections 1 and 2 and FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting; • Analysis of root cause; • Certificate holder controls; • Certificate holder followup to event(s); • Indicators of a trend with an escalation in severity; and • FAA and National Transportation Safety Board (NTSB) data sources. If root cause(s) and/or failure of event(s) are generally known and validated, consider the system(s), subsystem(s), and element(s) that relate to the failure or root cause. Consider also the SAS training subsystems and the Organizational Management System. If the certificate holder has not effectively and appropriately managed the events, also consider its manuals.	ALL
Enforcement Actions	Enforcement history of a certificate holder or the certificated airmen they employ determines this risk indicator's applicability. Enforcement action may indicate an unwilling attitude or inability to comply with safety standards. The greatest systemic safety risk is not from a specific operational event or its outcome, but rather from an airman or organization's unwillingness or inability to comply with safety standards and, most importantly, operating contrary to the core principles of Safety Risk Management (SRM). Considerations to determine the presence of this risk indicator include: • History and details of Compliance Action per Volume 14 to correct performance problems; • Corrective acting effectiveness; • Pending enforcements; • Management's attitude toward compliance; • Safety culture "attitude and strength;" and • Enforcement history. Enforcement action may indicate that this risk exists, requiring increased surveillance.	ALL

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Certificate Holder Performance History Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Surveillance History	Surveillance data that identifies surveillance problems may indicate nonmitigated or new areas of risks in the certificate holder's system. Considerations to determine the presence of this risk indicator include: • A decline in a specific system's performance; • An escalation of negative trending across systems; • Repeated concerns or ineffective corrective actions; • Certificate management negative trends tracked outside of SAS/Safety Performance Analysis System (SPAS) (e.g., National Program Tracking and Reporting Subsystem (NPTRS), certificate holder Safety Management System (SMS), etc.); and • Lack of surveillance data due to FAA resources. For negative SAS/SPAS data trends related to surveillance findings, associate the problem area(s) with the corresponding systems, subsystems, and elements. Focus on the areas that are the source of the adverse trend, including manuals, training, and personnel.	ALL
Department of Defense (DOD) Audits	The results of DOD audits and/or DOD Air Carrier Survey and Analysis Team monitoring data determine this risk indicator's applicability. These audits can help to identify hazards, risks, and systemic problems in the design and performance of its systems. Considerations to determine the presence of this risk indicator include: • Placement on DOD Close Watch program for safety concerns; • Temporary nonuse status for safety issues; • Recent DOD recertification after temporary nonuse status; • DOD survey results that are incomplete or not current; and • Removal from the DOD's list of qualified certificate holders. Evaluate and focus on those areas that correspond or are related to the adverse DOD findings.	ALL
Voluntary Disclosures	Data derived from voluntary reports of regulatory noncompliance and their corrective action(s) determine this risk indicator's applicability. Although corrective actions address the noncompliance, this may also indicate new areas of risks or those not fully mitigated in the certificate holder's system. Considerations to determine the presence of this risk indicator include: • Documented procedures for self-disclosure process; • Management's attitude towards submission of self-disclosures; • Participation in disclosure programs; • Corrective actions or repeated violations; • Employee awareness of the disclosure process; and • Repeated disclosures. Focus on the area of the voluntary self-disclosure(s). Drill down to the root cause(s) and relate these to the systems, subsystems, and elements. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL

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Certificate Holder Performance History Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Voluntary Programs	The use of voluntary program(s) to identify ongoing risk management (RM) issues and how program data is used to manage risk determine this risk indicator's applicability. These programs include Internal Evaluation Programs (IEP), Aviation Safety Action Programs (ASAP), flight operations quality assurance (FOQA), or independent flight safety programs such as the Commercial Aviation Safety Team (CAST). Voluntary data aids in hazard/risk identification and management of corrective actions. Considerations to determine the presence of this risk indicator include: • Determination of root cause(s); • Documented disclosure or reporting process procedures; • Management's attitude towards voluntary program participation; • Program effectiveness; • Repeated noncompliance; • Implementation of corrective actions; • Personnel awareness and use of voluntary programs; • Program trends; and • Participation in voluntary programs. Associate the data that causes concern with the applicable systems, subsystems, or elements. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL
Safety Hotline and Complaints	Documented complaints (including consumers, employees, whistleblowers, vendors, or other certificate holders) determine this risk indicator's applicability. Considerations to determine the presence of this risk indicator include: • Multiple complaints in same area(s) of concern; • A complaint in areas of concern; • Resolution history; • Implementation of corrective action; and • Effective and appropriate management of events. Focus on the subject area and nature of the complaint(s). Associate the data that causes concern with the applicable systems, subsystems, or elements. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL

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Figure 10-3-1D. CHAT Organizational Risk Indicator and Descriptions by Peer Group

Certificate Holder Organizational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Key Management Changes	Key management (as defined in 14 CFR part 119 or 145) changes determine this risk indicator's applicability. Any changes, regardless of operational experience, could significantly affect operational stability. Considerations to determine the presence of this risk indicator include: • SPAS flags; • Effects identified from key management changes (regardless of SPAS flag); • Reviewing the operations specifications (OpSpecs) and enhanced Vital Information Database (eVID) regularly to determine changes or vacancies in key management personnel; • Rapid and widespread changes in key management in multiple departments or operational areas, including middle managers; • Key management assuming multiple roles; • Relationship between the certificate holder and the FAA, including the certificate holder's willingness to share data and disclose findings to the FAA; and • Reorganizations that reduce the amount of safety oversight within the certificate holder. Volume 6, Chapter 2, Section 18, Safety Assurance System: Evaluation of a Certificate Holder's Management of Significant Changes Parts 121, 135, 145, and 91 Subpart K, discusses in detail the issues of RM for parts 121 and 135 certificate holders. This section includes a decision aid for scoring risk as it relates to rapid growth/downsizing. Use this decision aid to determine what action to take based on the risk.	ALL
Financial Conditions	Reports of a certificate holder's financial difficulty, financial statements generated by the certificate holder, or the DOT's Economic Authority determine this risk indicator's applicability. During financial instability, the possibility for risk may increase due to a number of complex and interrelated causes, factors, and results. These may directly or indirectly impact various aspects of the certificate holder's systems, subsystems, or elements. Considerations to determine the presence of this risk indicator include: • Deferment of discretionary spending (capital expenditure, training, advertising, etc.); • Sale of assets (spare parts, aircraft, lease back, operational routes, etc.); • Loss of significant vendors; • Delays in meeting payroll and other financial obligations; • Entrance into Debtor in Possession (e.g., bankruptcy); and • Effective and appropriate management of events. Volume 6, Chapter 2, Section 18 discusses in detail the issues of RM for parts 121 and 135 certificate holders. This section includes a decision aid for scoring risk as it relates to financial conditions. Use this decision aid to determine what action to take based on the risk. NOTE: "Financial Conditions" and "Rapid Growth or Downsizing": If the PI selects one or both of these two risk indicators, then the PI must use the Financial	ALL

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Certificate Holder Organizational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
	Condition Assessment Decision Aid and/or the Rapid Growth/Downsizing Assessment Decision Aid located in Volume 6, Chapter 2, Section 18. To document the decision aid results, the PI will add the overall score results in the comment section of the PI Options. For example, the following comment would be added: "Referred to the Rapid Growth/Downsizing Assessment Decision Aid in Volume 6. The overall results are as follows: 8–39, the operator seems to have major rapid growth or downsizing issues and an RMP will be initiated." (Refer to the Office of Inspector General (OIG) Audit Report.)	
Change in Other Management Personnel	Changes within major lines of business (safety, quality assurance (QA), engineering, operations, and maintenance departments) determine this risk indicator's applicability. Regardless of the certificate holder's size, personnel changes could significantly impact the operational stability if processes are not in place to manage the change. Considerations to determine the presence of this risk indicator include: • Sudden change in management; • Significant change rate in management within maintenance and operations organization(s); • Retraining/cross-training required for retained and new personnel or for expanded job functions; • Prior history of middle management change; • Rapid or widespread changes in management in multiple departments or operational areas; and • Effective and appropriate management of events. Volume 6, Chapter 2, Section 18 discusses in detail the issues of RM for parts 121 and 135 certificate holders. This section includes a decision aid for scoring risk as it relates to rapid growth/downsizing. Use this decision aid to determine what action to take based on the risk.	ALL
Turnover in Personnel	High-volume turnover in personnel who are required to produce the quality of systems, maintenance, and operations throughout the organization determine this risk indicator's applicability. A high turnover of operations or maintenance personnel can increase the potential for risk. Considerations to determine the presence of this risk indicator include: • Rate of turnover in personnel; • Replacement personnel qualifications; • Turnover within the maintenance and operations organizations that impact systems and operational stability; • Cross-training to cover the vacated positions; • Turnover in safety-sensitive areas; • Effective and appropriate management of events; and • Streamlining personnel departments that may reduce the amount of safety oversight within the certificate holder. Volume 6, Chapter 2, Section 18 discusses in detail the issues of RM for parts 121 and 135 certificate holders. This section includes a decision aid for scoring risk as it relates to rapid growth/downsizing. Use this decision aid to determine what action to take based on the risk.	ALL

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Certificate Holder Organizational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Reduction in Force	Workforce reductions, layoffs, or buyouts determine this risk indicator's applicability. The impact of workforce reduction can increase the potential for system failure or noncompliance. The safety impact depends on the reduction itself, the reason it occurred, and what/who was involved. Considerations to determine the presence of this risk indicator include: • Timing or synchronization of reduction in personnel; • Reduction/downsizing within the maintenance and operations organizations that reduces the amount of internal safety oversight within the certificate holder; • Reduction in experienced, safety-related, or training personnel; • History of comparable reductions in workforce; • Rapid and widespread reduction in safety-sensitive areas; • Effective and appropriate management of events; • Ensuring management has assessed the impact of a reduction in force layoff, or buyout timelines on certificate responsibilities; and • Workforce reductions or layoffs and impact on remaining staff to be retrained or cross-trained to perform new functions. Volume 6, Chapter 2, Section 18 discusses in detail the issues of RM for parts 121 and 135 certificate holders. This section includes a decision aid for scoring risk as it relates to rapid growth/downsizing. Use this decision aid to determine what action to take based on the risk.	ALL
Rapid Growth or Downsizing	The addition/reduction of aircraft, repair station ratings, routes, employees, programs, or business practices (e.g., increase/decrease in aircraft utilization) and other operational areas determine this risk indicator's applicability. Considerations to determine the presence of this risk indicator include: • Development and implementation of business plan(s); • Reliability rates, minimum equipment list (MEL) management, turn times between flights, and crew rest requirements; and • Effective and appropriate management of events. Volume 6, Chapter 2, Section 18 discusses in detail the issues of RM for parts 121 and 135 certificate holders. This section includes a decision aid for scoring risk as it relates to rapid growth/downsizing. Use this decision aid to determine what action to take based on the risk. NOTE: "Financial Conditions" and "Rapid Growth or Downsizing": If the PI selects one or both of these two risk indicators, then the PI must use the Financial Condition Assessment Decision Aid and/or the Rapid Growth/Downsizing Assessment Decision Aid located in Volume 6, Chapter 2, Section 18. To document the decision aid results, the PI will add the overall score results in the comment section of the PI Options. For example, the following comment would be added: "Referred to the Rapid Growth/Downsizing Assessment Decision Aid in Volume 6. The overall results are as follows: 8–39, the operator seems to have major rapid growth or downsizing issues and an RMP will be initiated." (Refer to the OIG Audit Report.)	ALL

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Certificate Holder Organizational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Merger or Acquisition	The details of the merger or acquisition (combination of divergent corporate and organizational structures and safety cultures, or simply a name change) determine this risk indicator's applicability. The inadequate management of a merger or acquisition may negatively impact the certificate holder's ability to perform continued compliance and safe operating procedures. Considerations to determine the presence of this risk indicator include: • Effective management of the certificate holder's procedures, controls, and process measurement; • Experience with the new type and complexity of the operation; • Inquiring if key personnel will be retained or replaced and if the buyer has an aviation background; • Interfaces between processes, procedures, and programs across departments; • Adherence to new processes, procedures, and programs; • Transition plan for accomplishing the merger or acquisition; and • Effective and appropriate management of the events. Volume 6, Chapter 2, Section 18 discusses in detail the issues of RM for parts 121 and 135 certificate holders. This section includes a decision aid for scoring risk as it relates to rapid growth/downsizing. Use this decision aid to determine what action to take based on the risk.	ALL
Labor Management Relationship	The relationship between the certificate holder's management and its labor organizations determines this risk indicator's applicability. Since a threatened or actual shutdown in operations can have an adverse economic impact on a certificate holder, poor labor-management relations negatively impact the stability of a certificate holder's systems. Considerations to determine the presence of this risk indicator include: • Informational picketing; • Newspaper advertisements, billboards, or other methods that describe lack of contract negotiations or bargaining; • Cross-utilization of employees in safety-sensitive areas due to the unrest (e.g., management working line functions in addition to their normal managerial responsibilities); • Status of bargaining agreement between labor and management; • Signs that indicate a lack of trust between parties; • Threatened or actual shutdown in operations that adversely impact the certificate holder; • Requests for employee concessions by management and lower than industry average compensation and benefits; • Work stoppage due to labor unrest; and • Effective and appropriate management of the events. Consider the labor and management relationship issues that cause concern with the applicable systems, subsystems, or elements. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System. Dissatisfaction among groups within the owner/operator base may indicate instability. For example, long hours and low pay for an owner/operator impact a repair station's system and operational stability.	ALL

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Certificate Holder Organizational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Relationship with FAA and Compliance Attitude	The working relationship between certificate holder personnel and FAA personnel assigned to oversee the certificate holder (i.e., level of communications, trust) determines this risk indicator's applicability. A weak communications infrastructure between parties can have a negative impact on certificate holder operations, quality, and safety. This, in turn, can affect the stability of the certificate holder's systems and may be an indication of risk. Considerations to determine the presence of this risk indicator include: • History of communications between the certificate holder and assigned FAA personnel; • Willingness to share data and findings with assigned FAA personnel; • Reception of FAA recommendations and suggestions; • Cooperation with assigned FAA personnel; and • Participation in voluntary programs. Consider which system(s), subsystem(s), and element(s) are directly affected by the lack of cooperation and/or communication. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL
Human Factors	Interactions of employees with the certificate holder's system, procedures, and controls determine this risk indicator's applicability. A certificate holder's failure to consider human factors when implementing procedures and controls could increase the level of risk in the system. Considerations to determine the presence of this risk indicator include: • Human factors addressed in systems; • Errors or violations related to human factors; and • Effective and appropriate management of events. Human factors issues could potentially impact every certificate holder system, as all systems involve human input and interaction. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL

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Figure 10-3-1E. CHAT Operational Risk Indicator and Descriptions by Peer Group

Certificate Holder Operational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Age of Fleet	Many aircraft of the current U.S. commercial fleet are considered to be aging aircraft. The age of the fleet must be considered to determine this risk indicator's applicability. The age of a certificate holder's fleet can impact its systems. Considerations to determine the presence of this risk indicator include: • Management of operational risk associated with aging aircraft; • Aging aircraft identification process; • Communications flow regarding the maintenance and operational requirements of an aging fleet; • Corrective action plans; • Maintenance program associated with aging aircraft; • Aircraft approaching the timeline for aging aircraft; and • Effective and appropriate management of events. Aging aircraft impacts the technical operations system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ABCDE
Varied Fleet/ Configuration	A certificate holder with a varied fleet or mixed configuration consists of: • Different aircraft types; • A mix of models and series of the same type; or • A number of different configurations of the same make and model within the same fleet. The ability to maintain or operate a varied fleet/configuration determines this risk indicator's applicability. Considerations to determine the presence of this risk indicator include: • Management structure to handle the impact of a varied fleet mix and mixed fleet configuration; • Class ratings (for air agencies); • Impact on the certificate holder's maintenance program; • Impact on the certificate holder's operations program; • Impact on the certificate holder's training program; • Controls for the varied fleet mix and mixed fleet configuration; • Performance history with varied fleet mix and mixed fleet configuration; • Tooling, equipment, and facilities; and • Appropriate or effective management of events. Maintenance or operation of varied fleet or mixed configuration could potentially impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL
Change in Aircraft Complexity	Changes in aircraft complexity, programs, and/or air agency ratings may require additional procedures and training. Considerations to determine the presence of this risk indicator include: • Controls and process measurement for managing changes in operations and maintenance;	ALL

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Certificate Holder Operational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
	• Experience of personnel with new technologies and the operational environment; • Audits to assess the effectiveness of the certificate holder's training programs and operation within its environment; • Performance history with incorporating complex aircraft; • Impact on system design or performance due to the change in aircraft complexity; and • Appropriate or effective management of events. Changes to an aircraft complexity could potentially impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	
Outsource (Maintenance, Training, Ground Handling, etc.)	The use of vendors, suppliers, and contractors could introduce risks associated with certificate holder processes and programs. Considerations to determine the presence of this risk indicator include: • Confusion of procedures due to association with multiple certificate holders; • Contract personnel training and records for adequacy and accuracy; • DOD findings against the contractor employed by the certificate holder; • Contractor qualifications and abilities; • Frequent changes of contractors; • Historical data; • Effective audits; • Contractor's violation history; • Certificate holder's oversight of all vendors and subcontractors; and • Determining if the contract maintenance provider (CMP) was approved by the contracting repair station. Use of outsource (maintenance, training, ground handling, etc.) could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System. For example, a repair station's outsourcing policies affect their internal surveillance requirements.	ALL
Certificate Holder's Management of Off-Hour Activities	A certificate holder's ability to manage its off-hour activities could impact overall effectiveness of all certificate holder systems. Considerations to determine the presence of this risk indicator include: • Amount, type, and complexity of activities; • Effective managerial oversight; • Availability of other resources (e.g., help desks, vendor support); • Exchange of information during shift change (e.g., shift change logs); and • Nontraditional work hours. Volume 6, Chapter 2, Section 18 contains Figure 6-35, Off-Hour Decision Aid. Use this decision aid to determine what action to take based on the risk. Consider that while some components of the decision aid scoring are primarily geared toward airworthiness activities, an assessment can also be made for flight/ground operations in conjunction with the decision aid.	ALL

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Certificate Holder Operational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
	Off-hour activities potentially impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	
New/Changes to Certificate Holder Programs	Program additions, deletions, or changes determine this risk indicator's applicability. Considerations to determine the presence of this risk indicator include: • Documented changes to programs; • Changes that are motivated by cost-cutting; • System control(s) to support the new/changed program; • Staffing and training to support the changed programs; • Performance history with new/changed programs; and • Effective and appropriate management of events. New and major changes to certificate holder programs could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL
Continuing Analysis and Surveillance System (CASS)	The procedures and data collection, data analysis, and trend reporting performed in support of the CASS to continuously monitor and correct deficiencies in its maintenance and inspection programs, as well as corrective action of any shortcomings identified by aviation safety inspectors (ASI), determine this risk indicator's applicability. Considerations to determine the presence of this risk indicator include: • Recurring findings after the issues have been mitigated; • CASS corrective actions result in new problem(s); • Recurring CASS findings are associated with the same system(s), subsystem(s), or element(s); • CASS results for consistency with other outside audit results (e.g., FAA and DOD); • Internal audit system of CASS (e.g., Safety Audit Program); • CASS performance history as indicated by an IEP, safety program, or other equivalent program(s). Since CASS could impact every certificate holder system, consider which system(s), subsystem(s), and element(s) are affected.	ABCDE
Increases in Logbook Discrepancies, MEL Deferrals, or Requests for Escalation	The number and type of logbook discrepancies, MEL deferrals, and requests for escalation determine this risk indicator's applicability. Considerations to determine the presence of this risk indicator include: • Repeat maintenance logbook discrepancies; • MEL management; • Number of extensions to MEL requests; and • Requests for escalation of maintenance and inspection program items.	ABCDE

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Certificate Holder Operational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
	Increases in logbook discrepancies, MEL deferrals, or requests for escalation could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	
Seasonal Operations	Attention to and preparation for seasonal operations may determine this risk indicator's applicability. Considerations to determine the presence of this risk indicator include: • Experience with seasonal operations; • Procedures and controls that support the operation; and • Audits of its seasonal operations. Seasonal operations could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ABCDE
Complex Operations and Environmental Considerations	The certificate holder's ability to manage complex operations and environmental considerations that have influences on their scope of operation. The certificate holder's inability to adapt to such influences may lead to an unacceptable level of risk. Considerations to determine the presence of this risk indicator include: • Management of complex operations and environmental considerations; • Experience, training, or competency of personnel; and • Resource management. Complex operations and environmental considerations could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL
Relocation and Closing of Facilities	Relocation and closing of facilities determine this risk indicator's applicability. Considerations to determine the presence of this risk indicator include: • Performance history with regard to the relocation and closing of facilities; • Equipment and facilities; • Rate and pace of relocation and/or closing; • Personnel requirements, adequate resources, training, documentation, and manual changes; • Background and experience of personnel at new facility; and • Management of the event(s). Relocation and closing of facilities could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System. For example, a new repair station may require more surveillance than an older established facility, or it may lack the tools or equipment to do the required work.	ALL

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Certificate Holder Operational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Lease Arrangements and Code-Share Agreements (Refer to the OIG Audit Report AV-2013-045, Growth of Domestic Airline Code Sharing Warrants Increased Attention.)	The use of lease arrangements (e.g., wet lease, dry lease, interchange, and code-share agreements) determines this risk indicator's applicability. The variety of leasing arrangements or code-share agreements a certificate holder enters into and different aspects of those arrangements can have an impact on its maintenance, training, operations, and programs. Considerations to determine the presence of this risk indicator include: • Establishment of operational control; • Audits of lease agreements; • Flightcrew and ground crew training; • Controls and interfaces in procedures required by lease agreement; and • Impact on normal certificate holder operations. Lease arrangements and code-share agreements could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ABCDE
Safety Management	The certificate holder's management of its safety-related processes determines this risk indicator's applicability. Considerations to determine the presence of this risk indicator include: • Designated safety responsibilities for management personnel; • Conducting risk assessments before implementing new systems, revising systems/processes, or developing new procedures, or after hazards or deficiencies have been identified in a design; • Proper identification of hazards; • Designing and implementing risk controls; • Internal audits, evaluations, monitoring employee reports, or investigation of operational events; and • Safety performance of the process and the followup action. Safety management could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL
Helicopter Air Ambulance (HAA) System Safety Risk Management/ Assessment Program	The certificate holder's management of the HAA System Safety Risk Management/Assessment Program determines this risk indicator's applicability. This program contains risk assessment and management procedures that identify risks in HAA operations. Considerations to determine the presence of this risk indicator include: • Overwater briefings and procedures; • Inadvertent instrument flight rules (IFR) procedures; • Visual flight rules (VFR) flight planning procedures; • Preflight risk analysis; • System safety risk management/assessment program; and • Adherence to the system safety risk management/assessment program. HAA System Safety Risk Management/Assessment Program(s) could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	E

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Certificate Holder Operational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Status of Air Medical Resource Management (AMRM) Training	The certificate holder's management of the status of AMRM training determines this risk indicator's applicability. AMRM enhances the air medical community by promoting team cohesiveness and adaption during change through management of available resources. Considerations to determine the presence of this risk indicator include: • Training to accurately reflect the operating philosophies, policies, practices, and procedures of the organization; • Defined and implemented procedures, training, and operational practices; • Management's commitment to the training program; • Training curriculum (e.g., team building, communication skills, coordination involved in the decision-making process, recurring training); and • Assessment process for training. AMRM could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	BCDE
Special Equipment	The certificate holder's management of special equipment determines this risk indicator's applicability. The General Operations Manual (GOM), maintenance manual, MEL, ground and flight training curricula, and OpSpecs contain details regarding the certificate holder's special equipment (e.g., night vision goggles (NVG), polar equipment, Head-Up Display (HUD), onboard cameras, and Forward Looking Infrared (FLIR)). Considerations to determine the presence of this risk indicator include: • Training curriculum; • Consistent information across manuals; and • Testing and inspections requirements. Special equipment could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ABCDE
Handling of Hazardous Materials (Hazmat)/ Dangerous Goods	The certificate holder's management of hazmat determines this risk indicator's applicability. Handling of hazmat/dangerous goods could increase the level of risk in the system and processes. Considerations to determine the presence of this risk indicator include: • Procedures to accept, reject, handle, store, and load hazmat; • Procedures for notification of loaded hazmat on board an aircraft; and • Training curriculum for all direct and contracted employees that handle hazmat. Hazmat could impact every certificate holder system. Consider which system(s), subsystem(s), and element(s) are affected. Evaluate interfaces such as training and personnel, and also consider the Organizational Management System.	ALL

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Certificate Holder Operational Risk Indicators		
Risk Indicator	**Description**	**Peer Group**
Other Risks Identified by the Principal Inspector(s) (PI)	The PI's identification of risks not captured in the Certificate Holder Assessment Tool (CHAT) Risk Indicator Table above for the certificate holder, which requires further analysis.	ALL
GEO Political: Health	The sociological interest in political systems is having confidence with who holds the power in the relationship of the government and its people and how the government's power is used. Some types of political systems are (sociology of political systems): • Authoritarianism; • Monarchies; and • Democracy. Consider the three types of political system when evaluating the health of the aviation authority (AA) in determining risk. The inability to conduct oversight would be a consideration in selecting this risk indicator.	ALL
GEO Economical: Health	Economic security is becoming a vital component to a country's ability to manage its relationships in the global aviation environment with the expansion of regional trade deals and the integration of global financial markets. Considerations to determine the presence of this risk indicator include: • Rising global geopolitical tensions; • Economic crises within the country; • Relationship between politics and economics, especially on an international scale; • Political factors relating to or influencing a nation or region; and • Agreements between countries.	ALL
AA/Health	The ability of the AA to conduct oversight of the Approved Maintenance Organizations (AMO) identified in the agreement. Considerations that influence this risk indicator include: • Training for inspectors conducting oversight of the AMOs; • Newly formed agreements between the United States and the AA for oversight of the AMOs; • Foreign policies: stability/finances of the AAs; and • Span and control: the capacity to effectively provide oversight due to distance and amount of AMOs.	ALL

10-3-1-11 through 10-3-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 4 RESOURCE MANAGEMENT

Section 1 Safety Assurance System: Module 3 Resource Management

10-4-1-1 GENERAL. Resource management is an ongoing process to ensure that Continued Operational Safety (COS), initial certification, and Certificate Holder Evaluation Process (CHEP) resources are assigned to the highest-risk priorities, as identified in the Comprehensive Assessment Plan (CAP). Frontline Managers (FLM) and Office Managers (OM) ensure that resources are assigned to tasks in resource order. Quarterly and yearly planning cycles consist of Design Assessments (DA), Performance Assessments (PA), and Custom Data Collection Tools (C DCT).

NOTE: Security is an important feature of the Safety Assurance System (SAS) automation. If you, as a SAS user, detect a security breach, or there is an indication of a security risk, you should immediately notify the office SAS Security Auditor or SAS Administrator. See Volume 10, Chapter 1, Section 1, Subparagraph 10-1-1-5I, Security Risks, for more information.

A. Purpose. The resource management process assesses the CAP and assigns resources to execute the risk-based, data-supported plan.

B. Scope. In Module 3, Resource Management, the FLM and OM will:

- Review the CAP,
- Determine if resources are available,
- Assign and adjust resources and allocate funding,
- Assign assessments by resource order, and
- Concur with the CAP.

10-4-1-3 RESERVED.

10-4-1-5 BACKGROUND. SAS encompasses the certification, routine surveillance, and certificate management processes for certificate holders. It assesses the safety of Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 145 certificate holders' operating systems using system safety principles, Safety Attributes, and risk management (RM). SAS also assesses the requirement to provide service at the highest level of safety in the public interest. Module 3 provides the resources, training, and funding to execute the CAP.

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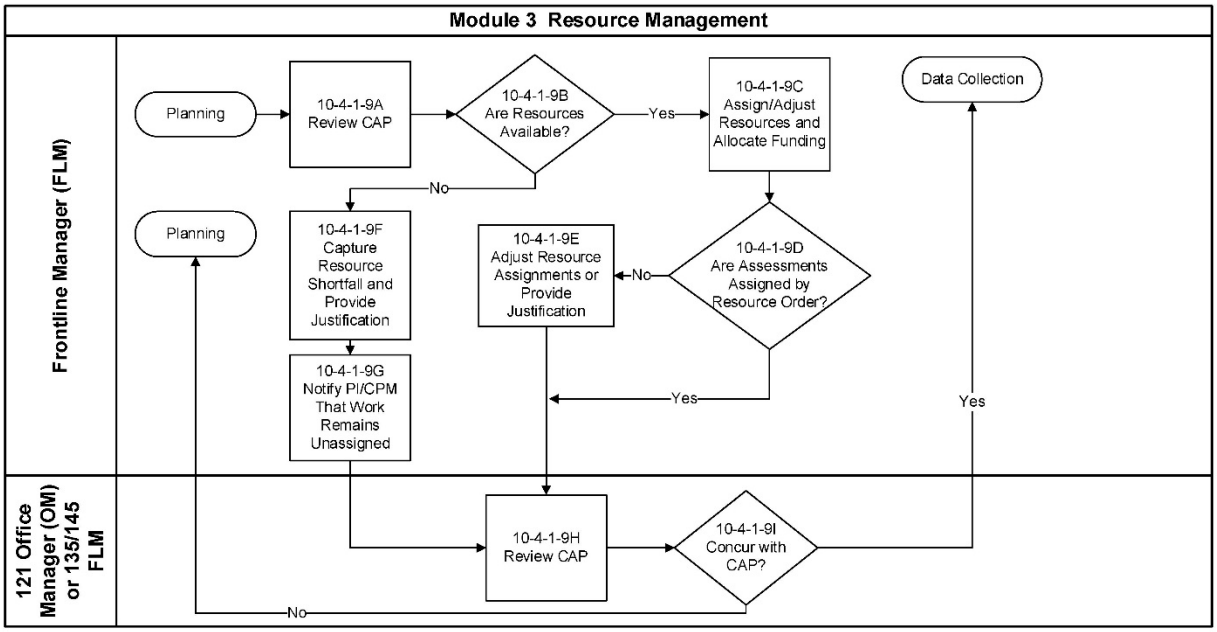
10-4-1-7 RESOURCE MANAGEMENT.

Figure 10-4-1A. Module 3 Resource Management Process Flowchart



10-4-1-9 PROCEDURES.

A. Review CAP (see flowchart process step 10-4-1-9A). All items on the CAP must either be resourced or, if resources are not available, captured with a shortfall and justification. The FLM reviews the CAP for the following items to determine any impact to budget, training, qualifications, etc.:

- Assessment due date(s) and any due date(s) exceeding the baseline interval to ensure justification is valid;
- Adjusted intervals;
- Adjustments to the resource order of assessments to ensure justification is valid;
- Assessments planned by resource order;
- Unplanned Data Collection Tools (DCT) to verify they are last in resource order;
- Geographic resource assignment; and
- Principal inspector (PI) instructions.

B. Are Resources Available? (see flowchart process step 10-4-1-9B). If the FLM determines resources are not available, then he or she will capture the resource shortfall and provide justification (see step 10-4-1-9F). If resources are available, then the FLM should consider the following items:

1) Training and Experience. Consider training, experience, qualifications, and geographic location.

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2) SAS Training. Ensure all training requirements are met, to include the applicable SAS courses (see Volume 10, Chapter 1, Section 3 for SAS courses).

3) Availability. Determine if leave or training impacts the assignments.

4) Workload. Consider office-staffing and workload factors. The FLM should access the Resource Usage Summary in the automation to view work assignments.

5) Operating Factors. Consider the certificate holder or applicant's operating factors (seasonal, all cargo, peer group, fleet size, type, age, route structure, and rates).

6) Funding. Consider the availability of the funds to support the assessments. Assessments planned in the CAP must not be deleted because of the lack of funding.

7) Leveraging Resources. Consider creating a report with the use of a geographical map to determine the location of SAS users by specialty, technical discipline, and location. Specialties include Airworthiness (AW), Operations (OP), and Both (AW and OP). Technical disciplines include:

- Air Carrier,
- Avionics,
- Cabin Safety,
- General Aviation,
- Hazardous Materials,
- Helicopter/HAA Qualified,
- Dispatch,
- Maintenance,
- Non-1825, and
- Operations.

8) Shared Resources. Consider the use of the shared aviation safety inspector (ASI) or multiple office automation functionality.

C. Assign/Adjust Resources and Allocate Funding (see flowchart process step 10-4-1-9C). If resources are available to complete the CAP, then assign resources or adjust assessments and allocate funding. The FLM/OM reviews the Resource Work List (RWL) to assign and adjust resources. DCTs and C DCTs are assigned to individual ASIs or a team assignment. The FLM should consider the following factors when assigning resources:

1) Office Roster. The office roster contains a list of the office personnel who can perform job functions in SAS. When FLMs assign work, they can select from any of the office personnel listed on the roster, regardless of the certificate. If an FLM intends to assign work to an ASI who is not assigned to that FLM, he or she must coordinate with the ASI's FLM prior to assigning work.

2) Assessment Details. The assessment details identify the appropriate individual, geographic resource, or team (DCT and C DCT only) to perform the data collection.

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3) Team Coordinator (TC). Consider the PI/certification project manager (CPM) recommendations for the TC. The TC should have experience in collecting data for the assigned DCT or C DCT.

4) Changing Assignments. FLMs can change assignments at any time. This may include switching from unassigned to assigned, or reassigning a DCT from one ASI to another. If a DCT has already been started, the questions that were already answered would remain. The newly assigned ASI can continue to answer the rest of the questions. The answered questions from the previous ASI can be duplicated and answered again by the newly assigned ASI.

5) Certificate Management of Multiple Offices for PIs. PIs may be assigned to multiple offices and certificates to efficiently prioritize certificate management responsibilities based on risk. OMs must ensure appropriate communication, coordination, and approval occur prior to assigning a PI to multiple offices or certificates.

a) The requesting office identifies the need for a PI resource to support certificate management work.

b) The resourcing office must consider the workload of the requested PI. The OM will then notify the requesting office of the selection.

6) Aircraft Dispatch Safety Inspectors (DSI) and Cabin Safety Inspectors (CSI). DSIs and CSIs should be assigned to conduct specific System or Subsystem Data Collection Tools (SP DCT) and Element Design (ED), Element Performance (EP), and C DCTs related to their specialty to help target risk analysis. DSIs and CSIs are subject matter experts (SME) who possess the knowledge and experience to assist in the interface with elements containing targeted question areas. In addition, they are great resources to assist with certain operations inspections items such as minimum equipment lists (MEL)/Configuration Deviation Lists (CDL)/nonessential equipment and furnishings (NEF), station operations, manual management, appropriate aircraft equipment, Extended Operations (ETOPS), aircraft performance, etc. The following table lists some of the DCTs, but not all, that are generally conducted by a DSI or CSI. If a DSI or CSI is not available, then the OM can contact another Flight Standards office or the appropriate division to locate a resource.

Table 10-4-1A. DCTs Conducted by DSIs or CSIs

NOTE: This applies to part 121 and large part 135 Certificate Management Teams (CMT) (Peer Groups A and B) and should be applied to peer groups in part 135 C through E whenever feasible. This is not an all-inclusive list.

SP DCT	Element	Dispatch/Cabin
3.1	3.1.1 & 3.1.2	Dispatch
3.3	3.3.1, 3.3.2, 3.3.3, & 3.3.4	Dispatch (and Cabin Safety 3.3.4)
5.0		Cabin Safety
5.1	5.1.1 & 5.1.2	Cabin Safety
5.2	5.2.1, 5.2.2, 5.2.3, & 5.2.4	Cabin Safety

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7) Resource Sharing.

What is a resource?	A resource is someone who can conduct work activities for one or more certificates. Automation for resourcing both shared ASI and multiple offices is found in the Automation User Guide (AUG).
Who can designate a resource?	The OM has the authority to designate a resource.
Where can a resource be shared?	A resource can be shared within a particular office or nationwide.
Who does the resource report to?	A resource reports to only one supervisor. All work requests are coordinated through the resource's FLM or OM. The resource's FLM or OM will make the final decision if there is conflict over work requests.
What should be some of the workload considerations?	A resource should work with his or her FLM or OM to ensure the workload is manageable. The ultimate responsibility of ensuring a resource's workload is manageable and distributed fairly belongs to the FLM or OM. Some considerations are: • Experience of the resource; • Number of certificate holders the resource is assigned to; • Number and scope of DCT assignments; • Complexity of the certificate holder; • Certificate management responsibilities; • Oversight of airmen and designees; and • Other duties as assigned.
How is the workload monitored?	FLMs and OMs can monitor the SAS workload with the DCT Status Report. This report consists of details for work assignments by office, certificate holder, or resource, and by speaking directly with the resource.
What is the responsibility of the requesting office?	Certificate management responsibility resides within this office. The requesting OM communicates directly to the OM of the resourcing office with availability of the resource.
What is the responsibility of the resourcing office?	The resourcing OM communicates directly to the OM of the requesting office with availability of the resource.
What automation do I use to request an IFO ASI to perform inspections outside the United States?	The SAS automation shared ASI functionality can be used to choose ASIs from an IFO to accomplish geographic inspections outside the United States.
What automation do I use to choose ASIs outside my office to accomplish ad hoc inspections outside of my geographic location?	The SAS automation shared ASI functionality can be used to choose ASIs from other offices to accomplish inspections in other geographic locations.
What automation do I use for an FLM or OM?	The SAS automation multiple office functionality can be used to share an FLM or OM in another office.
What automation do I use to share an ASI to fill the role of a PI in another office?	The SAS automation multiple office functionality can be used to share an ASI to fill the role of a PI in another office.
What automation do I use to share an ASI with another office?	The SAS automation shared ASI functionality can be used to share an ASI with another office.

NOTE: Prior to assigning part 145 PIs to multiple offices, coordination with the Aviation Data Branch is required.

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D. Are Assessments Assigned by Resource Order? (see flowchart process step 10-4-1-9D). If the FLM makes assignments in resource order, then see Step 10-4-1-9H, Review CAP. If changes are required, then see Step 10-4-1-9E, Adjust Resource Assignments or Provide Justification.

E. Adjust Resource Assignments or Provide Justification (see flowchart process step 10-4-1-9E). The FLM adjusts resource assignments for the available resources. If there are situations where resources are not assigned in resource order, then the FLM must provide a justification. If resources are not selected, then see Step 10-4-9F, Capture Resource Shortfall and Provide Justification.

F. Capture Resource Shortfall and Provide Justification (see flowchart process step 10-4-1-9F). If resources are not available, due to a lack of funding, personnel, or other reasons, the FLM must select an item from the list below and use the "Justification" field for additional information that supports the selection. For example, if "Configuration changes for existing certificate holder" is the reason selected, then include what the configuration change is in the "Justification" field. This information is provided to the PI/CPM for future planning cycles. Below is a list of reasons why resources are not available:

- Other System or Subsystem Performance Assessments (SPA), Element Performance Assessments (EPA), or Element Design Assessments (EDA) for surveillance (used when assessments are bundled and time does not permit completion of all assessments);
- Configuration changes for existing certificate holder (used when the performance assessment is delayed until the system change is implemented);
- Risk-Based Decision Making (RBDM) (used when resources are allocated to higher risk certificate holders);
- Other duties (used when higher priorities exist outside of SAS, such as managing non-SAS certificate holders, or accident investigations);
- On leave (used when the qualified inspector is on leave and no other qualified inspector is available);
- Travel funding is unavailable (used when funds are not available);
- Not yet qualified (used when an ASI is not qualified, but training is scheduled); and/or
- Staffing shortages (used when there are not enough qualified ASIs to perform assessments).

G. Notify PI/CPM That Work Remains Unassigned (see flowchart process step 10-4-1-9G). If work remains unassigned, the FLM is required to notify the PI/CPM. If an assessment could not be resourced, the PI/CPM can use the Surveillance History Risk Indicator to document the potential risk due to lack of resources. The next assessment on the CAP can be adjusted to address the potential risk.

H. Review CAP (see flowchart process step 10-4-1-9H). For part 121, the OM reviews the CAP. For parts 135 and 145, the FLM reviews the CAP. The CAP must be reviewed for the following items:

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- Assessment due date(s) and any due date(s) that exceed(s) the baseline interval;
- Adjusted intervals;
- Adjustments to the resource order of assessments;
- Assignment of resources by resource order;
- Unassigned DCT(s);
- Geographic resource recommendation; and
- PI instructions.

NOTE: All items are either resourced or, if resources are not available, captured with a shortfall and justification.

I. Concur with CAP? (see flowchart process step 10-4-1-9I). During the yearly planning cycle, the FLM/OM concurs with the entire CAP. When PIs submit actions that trigger a new CAP concurrence during the planning cycle, the FLMs have the ability to concur per individual certificate holder.

NOTE: Table 10-4-1B, FLM/OM Concurrence, shows when FLM or OM concurrence is required when changes to the CAP occur after the annual and/or quarterly planning process.

1) For the PIs that share a CAP and have different FLMs, it is important that both FLMs agree with the CAP prior to the FLM concurring with the CAP in the automation. Either FLM has the ability to concur with the CAP. Automation shows the "Concur" checkbox and the reason for the CAP concurrence under the PI who submitted the CAP.

2) For part 121, if the OM nonconcurs with the CAP, then he or she should discuss the matter with the FLM. The FLM should then discuss the matter with the PI/CPM. The PI/CPM may need to adjust the plan as necessary.

3) For parts 135 and 145, if the FLM nonconcurs with the CAP, then he or she should discuss the matter with the PI or CPM. The PI/CPM may need to adjust the plan as necessary.

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Table 10-4-1B. FLM/OM Concurrence

Part	When Concurrence is Required	FLM Concurrence	OM Concurrence
121	Resource order is changed for SPA.		Yes
121	Resource assignment status is changed from "Assigned" to "Unassigned."		Yes
121	Reassignment of an assigned resource.		Yes
121	Addition or removal of EDA, EPA, and C DCT.		Yes
121	Add or remove DCTs from an SPA and EPA.		Yes
121	Assessment is moved out one quarter.		Yes
121	Assessment is moved out two or more quarters.		Yes
135/145	Resource order is changed for SPA.	Yes	
135/145	Resource assignment status is changed from "Assigned" to "Unassigned."	Yes	
135/145	Addition or removal of EDA, EPA, and C DCT.	Yes	
135/145	Reassignment of an assigned resource.	Yes	
135/145	Add or remove DCTs from an SPA and EPA.	Yes	
135/145	If assessment is moved out one quarter beyond the baseline quarter.	Yes	Yes
135/145	If the assessment is moved out two or more quarters beyond the baseline quarter.	Yes	Yes

10-4-1-11 through 10-4-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 5 DATA COLLECTION, DATA REPORTING, AND DATA REVIEW

Section 1 Safety Assurance System: Module 4 Data Collection

10-5-1-1 GENERAL. Aviation safety inspectors (ASI) collect data in accordance with the Comprehensive Assessment Plan (CAP). Aviation safety technicians (AST) who are trained and qualified can provide technical support to ASIs during data collection activities if they are assigned to do so by their Frontline Manager (FLM). ASTs can provide technical support with the research and documentation; however, they cannot perform data collection.

NOTE: Security is an important feature of the Safety Assurance System (SAS) automation. If you, as a SAS user, detect a security breach, or there is an indication of a security risk, you should immediately notify the office SAS Security Auditor or SAS Administrator. See Volume 10, Chapter 1, Section 1, Subparagraph 10-1-1-5I, Security Risks, for more information.

A. Purpose. ASIs use Data Collection Tools (DCT) to document assessments of the certificate holder's or applicant's design of systems, surveillance of certificate holder performance, identification of safety concerns or statutory/regulatory noncompliance, and any other relevant information. The DCT information helps the principal inspectors (PI)/certification project managers (CPM) assess the certificate holder's or applicant's system performance and design.

B. Scope. This section applies to ASIs. In the Data Collection Module, the ASI will:

- Prepare for data collection;
- Collect data;
- Determine if safety issues or regulatory issues were identified;
- Act on safety and regulatory issues;
- Create a Dynamic Observation Report (DOR), when needed, to document an unfavorable observation of performance outside of the assigned/planned DCT; and
- Inform the PI/CPM of significant safety issues or regulatory noncompliance.

10-5-1-3 RESERVED.

10-5-1-5 BACKGROUND. SAS encompasses the certification, routine surveillance, and certificate management processes for certificate holders. It assesses the safety of Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 145 certificate holders' operating systems using system safety principles, Safety Attributes, and risk management (RM). SAS also assesses the requirement to provide service at the highest level of safety in the public interest. Module 4 contains the processes for data collection, reporting, and review.

A. DCTs. There are three levels of DCTs: System, Subsystem, or Element. Each DCT has a purpose and objective statement and associated Safety Attributes: Responsibility,

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Authority, Procedures, Controls, Process Measurement, Interfaces, and Safety Ownership. DCTs are not checklists of questions to ask the certificate holder's or applicant's personnel; instead, they are a means to assess a system, subsystem, or element.

1) Purpose. The purpose statement defines the desired outcome for which the certificate holder is responsible.

2) Objective. The objective statement establishes the Federal Aviation Administration's (FAA) oversight objective. Before the PI accepts or approves the certificate holder's process design, he or she uses the data ASIs collect to determine if the certificate holder is able to:

a) Comply with the regulations, and

b) Achieve the desired outcome in the purpose statement.

3) Safety Attributes. SAS consists of seven Safety Attributes to evaluate the certificate holder's or applicant's operating systems. The qualities of a system (e.g., Responsibility, Authority, Procedures, Controls, Process Measurement, Interfaces, and Safety Ownership) should be present in a well-designed certificate holder or applicant system and process. The Safety Attributes provide a foundation for the DCTs so the PIs can make informed decisions about the certificate holder's or applicant's operating systems, including considerations of possible risks. Every DCT question is based on one of the Safety Attributes. The PIs can use the data provided by the Safety Attributes when they approve or accept programs or systems and analyze data collected during scheduled Performance Assessments (PA). PIs will consider the characteristics of each Safety Attribute in both the development (design) of the program and its outcome (performance that shows whether or not it works as intended). Although some Safety Attributes may not be required (by regulation) to approve a design or performance, incorporating Safety Attributes into the certificate holder's or applicant's design/performance will provide a greater chance of finding risks.

a) Responsibility. A clearly identified person who is responsible for ensuring financial and human resources to ensure the safety and quality performance of a process.

b) Authority. A clearly identifiable, qualified, and knowledgeable person who has authority to effectively plan, direct, and control resources; change procedures; and make key determinations, including safety risk acceptance decisions.

c) Procedures. Methods or practices including checks and restraints that are written or unwritten and regulatory or nonregulatory, designed into a process that a certificate holder/applicant uses to accomplish a desired result. "Unwritten methods" refer to certificate holders/applicants that are not required by regulation to have documented procedures.

d) Controls. Developing and maintaining the need for, and adequacy of, new or revised risk controls into a process to ensure mitigation of unacceptable risk.

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e) Process Measurement. Monitoring and measuring the outputs and safety performance of a process and identifying problems, or potential problems, in order to take corrective action.

f) Interfaces. Interactions between processes that must be managed in order to ensure desired outcomes.

g) Safety Ownership. The measure of understanding an individual has of how his or her performance of safety-related duties contributes to the safety performance of the element.

NOTE: System or Subsystem Performance Data Collection Tool (SP DCT), Element Performance Data Collection Tool (EP DCT), and Element Design Data Collection Tool (ED DCT) questions are all based on Safety Attributes; however, only the procedures questions contain regulatory and guidance references.

NOTE: Safety Attribute questions can be directly observed or addressed verbally through a discussion. ASIs must always assess the Safety Attributes throughout the certificate holder/applicant's practices, no matter the size or scope of the operation. If there is evidence that the certificate holder is addressing that Safety Attribute, then a favorable response is appropriate. If there is no apparent evidence that Safety Attributes are being addressed, then an unfavorable response is warranted. These issues still need to be addressed with the certificate holder/applicant even though they may not be regulatory. A response of "N/A" is not appropriate; Safety Attributes apply to all certificate holders/applicants, regardless of size and scope.

B. DCT-to-Go. Provides the ASI with the scoped DCT questions that can be printed or viewed with space for the ASI to write in responses.

C. Note. A note contains information to clarify and help the ASI better understand the question.

D. Specific Regulatory Requirements (SRR). Some questions validate compliance with SRRs (14 CFR). Questions that have SRRs appended to them indicate the question is based on a specific regulation (14 CFR). Questions that do not have an SRR appended to them are not based on a regulatory requirement, but are based on system safety principles and/or other FAA guidance. An unfavorable response to a question that does not have an SRR, while not a violation, may indicate a hazard with an increased level of risk (see Table 10-5-1B, Types of Responses).

NOTE: DCTs may contain answer sets that include Yes/No, Descriptive Scale (What did you see?), and Sampling (e.g., records or parts). Table 10-5-1A, Data Collection Type and Description, describes the different types of DCTs.

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Table 10-5-1A. Data Collection Type and Description

Data Collection Type	Description
System or Subsystem Performance Data Collection Tool (SP DCT)	**What Does it Contain?** SP DCTs contain questions related to the performance of each element within the system or subsystem. The SP DCT will include questions at either the system or subsystem level, depending on the peer group of the certificate holder/applicant. • For peer groups A, B, and E, the SP DCT will include six questions relating to each element within the subsystem, to include one question for each Safety Attribute. • For peer groups C, D, F, G, and H, the SP DCT will include one Procedures Attribute question for each element within the system and five additional questions addressing each of the remaining Safety Attributes. These five attributes will be addressed at the system level. • The SP DCT Procedures Attribute questions are high-level questions that ask about a specific process or program within the system or subsystem. They are based on specific regulatory requirements (SRR) and guidance. EP DCTs are directly related and support one another. SP DCTs include Safety Attribute questions at the element level. For example, SP DCT 1.1 asks the questions for 1.1.2, 1.1.3, etc. • Reviewing and/or answering the questions in the EP DCT will assist the aviation safety inspector (ASI) in answering the high-level SP DCT procedures question. • To review the associated EP DCT, the ASI can click on the "Related Element Questions" to view the EP DCT procedures questions (only for procedures DCT questions). ASIs can also print/save the associated EP DCT(s) from the "Prepare DCT" tab under "Related DCTs." Another option is that the ASI can add an EP DCT to their Individual Work Plan (IWP) from the SP DCT. Not all the EP DCT questions require a response, only the questions the ASI determines need a response to assist with answering the associated SP DCT question. • The ASI can duplicate questions if they are collecting data at another location, a different aircraft/facility, or when conducting a followup inspection as a result of an unfavorable finding and would like to capture that information on a new "Common Data" field. **NOTE:** All SP DCT questions require a response. If an issue is noted during the SP DCT, then the ASI has the ability to open and drill down to the related EP DCT questions during the data collection process. The ASI can add one or more EP DCTs but is not required to answer all associated EP DCT questions. **Output:** Process observation is the expected output for the SP DCT, which is focused on the observation of certificate holder personnel performing a procedure or process. **What Are the Response Choices?** The response choices vary by question type and may include sampling, descriptive scale, "Yes," "No," "Not applicable" (N/A), or "Not observable" (N/O), as appropriate.

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Data Collection Type	Description
Element Performance Data Collection Tool (EP DCT)	**What Does it Contain?** EP DCTs contain detailed performance questions about each element that mirror the ED DCT content. EP DCTs are accomplished at the element level and are linked to the related SP DCTs. Some elements by design will not have an associated ED DCT. **When is it Accomplished?** At the discretion of the principal inspector (PI) and the certification project manager (CPM). **Output:** Process observation is the expected output for the EP DCT, which is focused on the observation of certificate holder personnel performing a procedure or process. **What Are the Response Choices?** The response choices vary by question type and may include sampling, descriptive scale, "Yes," "No," "Not applicable" (N/A), or "Not observable" (N/O), as appropriate.
Element Design Data Collection Tool (ED DCT)	**What Does it Contain?** ED DCTs contain detailed design questions. Some elements by design will not have an associated ED DCT. ED DCTs are accomplished at the element level. For initial certification, the ED DCT is used to validate initial certification programs. **Output:** An assurance that a certificate holder's programs are designed to comply with the intent of the regulations and incorporate system safety. **What Are the Response Choices?** "Yes," "No," or "Not applicable" (N/A) may be used as appropriate.
Custom Data Collection Tool (C DCT) (National/Divisional or PI C DCT)	**What Does it Contain?** A C DCT is used to assess data outside the planned Performance Assessment (PA) or Design Assessment (DA). Both a PI C DCT and a National/Divisional C DCT can be used for focused inspections, special emphasis oversight, and to collect data on specific areas of concern outside of the normal planning schedule. If data needs to be collected on functions not covered by EP DCTs and ED DCTs, then a National/Divisional C DCT will need to be created. A PI can create a C DCT to include: • Both scoped and unscoped questions, • Design questions, and • Performance questions. A PI cannot create a C DCT to: • Combine design and performance questions, or • Combine Airworthiness and Operations questions. C DCTs are planned and can be used at the office, divisional, or national level.

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Data Collection Type	Description
Maintenance Provider Custom Data Collection Tool (MP C DCT)	**What Does it Contain?** MP C DCTs contain scoped performance-based questions that may be used by the Airworthiness PI for any ASI to perform surevillance of a maintenance provider. The MP C DCT is: • Created from Master List of Functions (MLF) System 4.0, Technical Operations. • Bundled element-level questions. • Identified or labeled by subsystem. • May be used for Coordinated Surveillance or Non-Coordinated Surveillance. • Seven separate MP C DCT templates. MP C DCT characteristics include the following: • Scoped for the certificate holder (14 CFR part 121, 135, or 121/135 with operations specification (OpSpec) D072). • Allows an ASI to capture a discrepancy contained within any MP C DCT not initially resourced. This is accomplished by adding the MP C DCT to the resourced MP C DCT. Any added MP C DCT does not require all questions to be answered. • Allows the ASI to capture any discrepancy not associated with the assigned MP C DCT by drilling across System 4.0 or other MLFs, or adding element questions from other MP C DCTs. • If a question is brought in from another MP C DCT by the ASI, the added question(s) will be assessed in the originating subsystem. • PIs will assess each discrepancy within the originating subsystem. • The MP C DCT may be assigned to an ASI or a team. A shared ASI may not be part of the team. • MP C DCTs are assessed on their own in the current quarter.
Random Inspection Custom Data Collection Tool (RI, Ramp C DCT)	**What Does it Contain?** RIs are planned or unplanned ramp inspections created from a National Template. The PI instructions may contain risk-based special emphasis items specific to a certificate holder. It could also contain National/Divisional instructions. **What Specialty Do I Select?** To record an unfavorable finding in the automation, on the "Create DCT" tab, the ASI must select the AW or OP specialty button to which the discrepancy/finding applies and not the specialty of the ASI observing it; this ensures the appropriate PI will see the unfavorable finding. **What is Required?** The ASI should document all items that were observed during the RI, including any risk-based special emphasis items. A minimum of one question must be documented. **What Are the Responses?** "Yes," "No," or "Not observable" (N/O). The N/O selection may be used if risk-based special emphasis items requested in the PI or National/Divisional instructions cannot be observed.

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Data Collection Type	Description
En Route Inspection C DCT	**What Does it Contain?** En Route inspections are planned or unplanned flight deck or cabin inspections created from a National Template. The PI instructions may contain risk-based special emphasis items specific to a certificate holder. It could also contain National/Divisional instructions. **What Specialty Do I Select?** To record an unfavorable finding in the automation, on the "Create DCT" tab, the ASI must select the AW or OP specialty button to which the discrepancy/finding applies and not the specialty of the ASI observing it; this ensures the appropriate PI will see the unfavorable finding. **What is Required?** The ASI should document all items that were observed during the En Route inspection, including any risk-based special emphasis items. A minimum of one question must be documented. **What Are the Responses?** "Yes," "No," or "Not observable" (N/O). The N/O selection should only be used if risk-based specialty emphasis items requested in the PI or National/Divisional instructions cannot be observed.
Dynamic Observation Report (DOR)	**What Does it Contain?** The DOR is used to record an unfavorable observation of performance outside the planned oversight process. A DOR has two options: Question-Based or "No Applicable Questions." The Question-Based DOR is used when there are existing SP DCT or EP DCT questions related to the observation. If no SP DCT questions relate to the observation, select "No Applicable Questions." The Flight Standards Service can use a DOR to notify the Office of Hazardous Materials Safety (AXH) when documenting a hazardous materials (hazmat) safety issue for parts 121, 129, and 135 by selecting the "AXH" organization in the automation. AXH has the ability to notify the Flight Standards Service of any safety issue by submitting a DOR for parts 121 and 135. Use the DOR in the following situations: • Safety issues unrelated to the DCT under assessment; • Safety issues for which there is not an applicable DCT question; • Safety issues for a certificate holder or applicant to which you are not assigned; or • Office, divisional, or national inspection events as directed.

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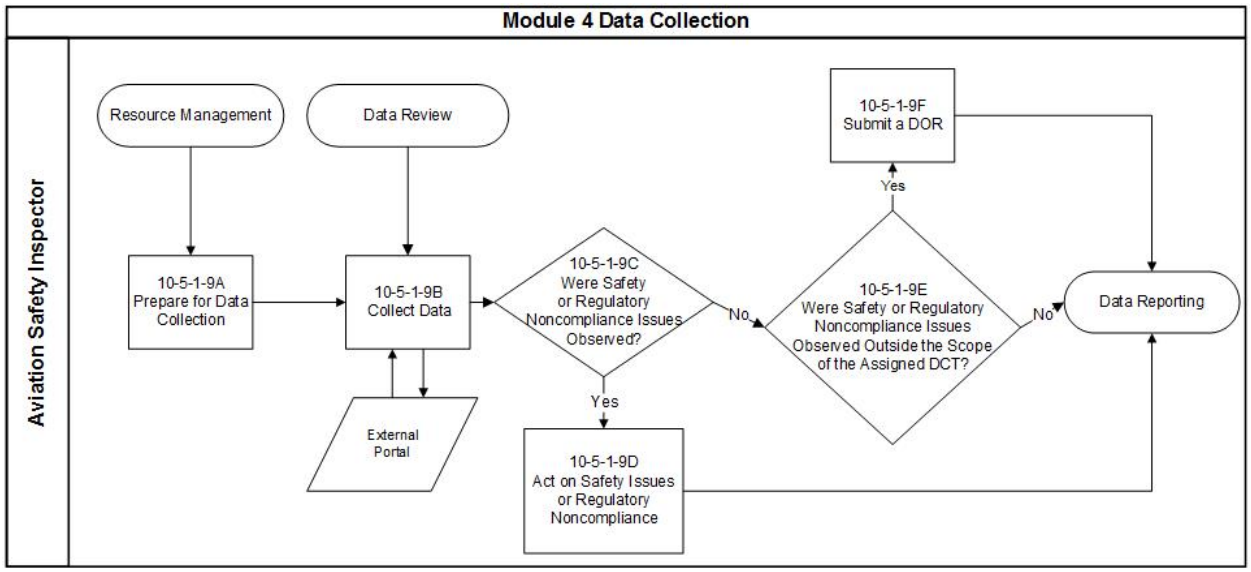
Table 10-5-1B. Types of Responses

Favorable	A "favorable" response means that the ASI observed conditions that met the criteria specified by that DCT. Only the first response listed in the DCT answer set is favorable. A "no" response can be considered a favorable response.
Unfavorable	An "unfavorable" response means that the ASI observed conditions that did not meet the criteria specified by the DCT. Any response not listed first in the DCT answer set is considered unfavorable. A "yes" response can be considered an unfavorable response.
Not Observable	A "not observable" response means that the ASI was not able to observe the situation described by a particular question at the certificate holder's or applicant's place of operation.
Not Applicable	A "not applicable" response is used when a question does not apply to that certificate holder or applicant. Choosing this option is appropriate only for questions that are not applicable due to the type of operation authorized for the certificate holder or applicant.

10-5-1-7 DATA COLLECTION.

Figure 10-5-1A. Module 4 Performance Assessment Data Collection Process Flowchart



10-5-1-9 PROCEDURES.

A. Prepare for Data Collection (see flowchart process step 10-5-1-9A). The first step in the data collection process is for the ASIs to prepare for data collection. The following items are required to be reviewed prior to starting data collection:

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1) En Route and RI Instruction Reports. Assisting ASIs in preparation for an En Route inspection or RI, the following reports include the risk-based areas identified by PIs and national/divisional offices:

a) En Route/Random Instructions Report. Located on the SAS Standard Reports page, provides access to all certificate holder instructions.

b) En Route/Random Instructions. Available when creating En Route and RI C DCTs, provides PI instructions for the selected certificate holder.

c) DCT-to-Go. Available during data collection and reporting for the En Route and RI C DCTs.

2) Pre-Inspection Checklist. Prepare for data collection by reviewing the Pre-Inspection Checklist items. When the review is complete, the ASI must select, "I have performed all the items on the Pre-Inspection Checklist and I am now ready to perform the data collection," to move to the next step, Step 10-5-1-9B, Collect Data. The Pre-Inspection Checklist contains the following items:

a) Review and ensure you understand the PI or CPM instructions.

b) Review and ensure you understand the DCT questions.

c) Review and ensure you understand the purpose and objective statements.

d) Review the SRRs.

e) Review FAA guidance.

f) Review the certificate holder's or applicant's operations specifications (OpSpecs), training programs, manuals, policies, procedures, and instructions.

g) Review the results of previous DAs and PAs.

h) Review the in-brief and out-brief procedures in Volume 1, Chapter 3, Section 1.

i) If conducting a team DCT, the team coordinator (TC) checks that each team member has performed each item on the Pre-Inspection Checklist. When the TC confirms that each inspector completes the checklist, the TC checks the box and answers, on behalf of the team, that everyone prepared for the inspection.

NOTE: The ASI must ensure that he or she has a thorough understanding of applicable items on the checklist prior to beginning data collection activities.

3) Related DCTs. Related DCTs are the other DCTs related to that system, subsystem, or element.

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B. Collect Data (see flowchart process step 10-5-1-9B).

1) Data Collection. ASIs collect data to ensure that the certificate holder's or applicant's system complies with the intent of the regulations and safety standards. The "DCT-to-Go" option provides the ASI with the scoped DCT questions that can be printed out or viewed in a PDF or Word format. The certificate holder or applicant may access the DCTs through the Flight Standards Information Management System (FSIMS). Complete the DCTs within the timeframes specified by the PI/CPM. For SP DCTs, EP DCTs, and ED DCTs only:

- If a newer version of a DCT you are working becomes available, the automation will notify you if the status of the DCT is "In Progress."
- If you have not answered any questions, you may choose the newest version of the DCT for data collection.
- If you have answered questions, you may continue with the previous version of the DCT.
- If you are completing an En Route or RI C DCT, the PI/National/Divisional instructions and questions will be locked when the "Continue" button is selected under the "Prepare DCT" tab.

2) ED DCTs Conducted in Partnership with the Certificate Holder. Certificate holders are encouraged to participate with the ASI to perform and complete an ED DCT. The certificate holder's personnel are considered participants of the ED DCT team.

NOTE: If noncompliance is discovered during the data collection process and the certificate holder is proactive and willing to correct the issue, then the ASI must document the Compliance Action in accordance with Volume 14.

C. Were Safety or Regulatory Noncompliance Issues Observed? (see flowchart process step 10-5-1-9C). If the ASI observes safety issues or regulatory noncompliance, then see Step 10-5-1-9D, Act on Safety Issues or Regulatory Noncompliance. If the ASI does not observe safety issues or regulatory noncompliance, then see Step 10-5-1-9E, Were Safety or Regulatory Noncompliance Issues Observed Outside the Scope of the Assigned DCT.

D. Act on Safety Issues or Regulatory Noncompliance (see flowchart process step 10-5-1-9D).

1) Act on a Safety Issue. If the ASI observes a condition that could result in an accident, incident, or regulatory noncompliance:

a) Stop data collection and intervene by notifying the appropriate certificate holder's or applicant's personnel.

b) Inform the PI/CPM and document the unfavorable finding in the DCT.

c) Follow the guidance specified in Volume 14, Chapter 1, Section 2.

d) The PI/CPM will assess the finding; a nonregulatory safety issue may still result in Compliance Action. Follow the guidance specified in Volume 14, Chapter 1, Section 2.

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The PI/CPM will refer to Volume 10, Chapter 6, Section 2 to document and track the progress of a safety issue in the Action Item Tracking Tool (AITT).

2) Regulatory Noncompliance. If the ASI/PI observes regulatory noncompliance:

a) Notify the appropriate certificate holder's or applicant's personnel.

b) Inform the PI/CPM and document the unfavorable finding in the DCT in accordance with Volume 14, Chapter 1, Section 2.

c) Take the most appropriate action to resolve the issue in accordance with Volume 14, Chapter 1, Section 2.

d) Document the regulatory noncompliance in the DCT and record any action taken in the "Inspector Action Taken" field, including Compliance Action per Volume 14, Chapter 1, Section 2. If the "Inspector Action Taken" field is not available, then record the information in the "Supporting Comments" field.

3) The PI Will Take the Following Action:

a) The PI/CPM will document and track regulatory noncompliance or other safety issues that require followup in the AITT.

b) If the PI/CPM determines the regulatory noncompliance is considered systemic in nature, then the PI/CPM will select an action and record the action details and progress in the AITT (see Volume 10, Chapter 6, Section 2).

E. Were Safety or Regulatory Noncompliance Issues Observed Outside the Scope of the Assigned DCT? (see flowchart process step 10-5-1-9E). If the ASI observes issues not related to a DCT, then see Step 10-5-1-9F, Submit a DOR. If the ASI observes any issues related to their assigned DCT, then report those issues in the DCT.

F. Submit a DOR (see flowchart process step 10-5-1-9F). If the ASI observes issues that are outside the scope of the assigned DCT, then the ASI creates a DOR. To initiate a Question-Based DOR, select from existing SP or EP DCTs that relate to the observation. If no SP DCT questions relate to the observation, select "No Applicable Questions." If the ASI observes safety issues or regulatory noncompliance, then see Step 10-5-1-9D, Act on Safety Issues or Regulatory Noncompliance. There may be situations where a question is not available. In that case, you would then select the "No Applicable Questions" checkbox.

NOTE: Document the regulatory noncompliance or the safety issue in the DOR. Record any action taken in the "Inspector Action Taken" field, including Compliance Action per Volume 14, Chapter 1, Section 2.

10-5-1-11 through 10-5-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 5 DATA COLLECTION, DATA REPORTING, AND DATA REVIEW

Section 2 Safety Assurance System: Module 4 Data Reporting

10-5-2-1 GENERAL.

A. Purpose. The Data Reporting Process Module defines the method for transferring data collected into the SAS automation.

B. Scope. This section applies to aviation safety inspectors (ASI), aviation safety technicians (AST), aviation safety assistants (ASA), team coordinators (TC), and Data Quality Reviewers (DQR). In the Data Reporting Module, ASIs, ASTs, ASAs, and TCs will:

- Enter data in accordance with data quality guidelines (DQG);
- Complete the Data Collection Tool (DCT);
- Document any Compliance Action in accordance with Volume 14, Chapter 1, Section 2; and
- Submit the DCT.

10-5-2-3 RESERVED.

10-5-2-5 BACKGROUND. The Safety Assurance System (SAS) encompasses the certification, routine surveillance, and certificate management processes for certificate holders. It assesses the safety of Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 145 certificate holder's operating systems using system safety principles, Safety Attributes, and risk management (RM). SAS is an automation tool that aids the Federal Aviation Administration (FAA) in determining that each certificate holder upholds its safety duties and responsibilities and that air carriers provide service with the highest possible degree of safety in the public interest. SAS consists of five modules that highlight important features of how the FAA certificates and performs surveillance on certificate holders. Module 4 contains the processes for data collection, reporting, and review.

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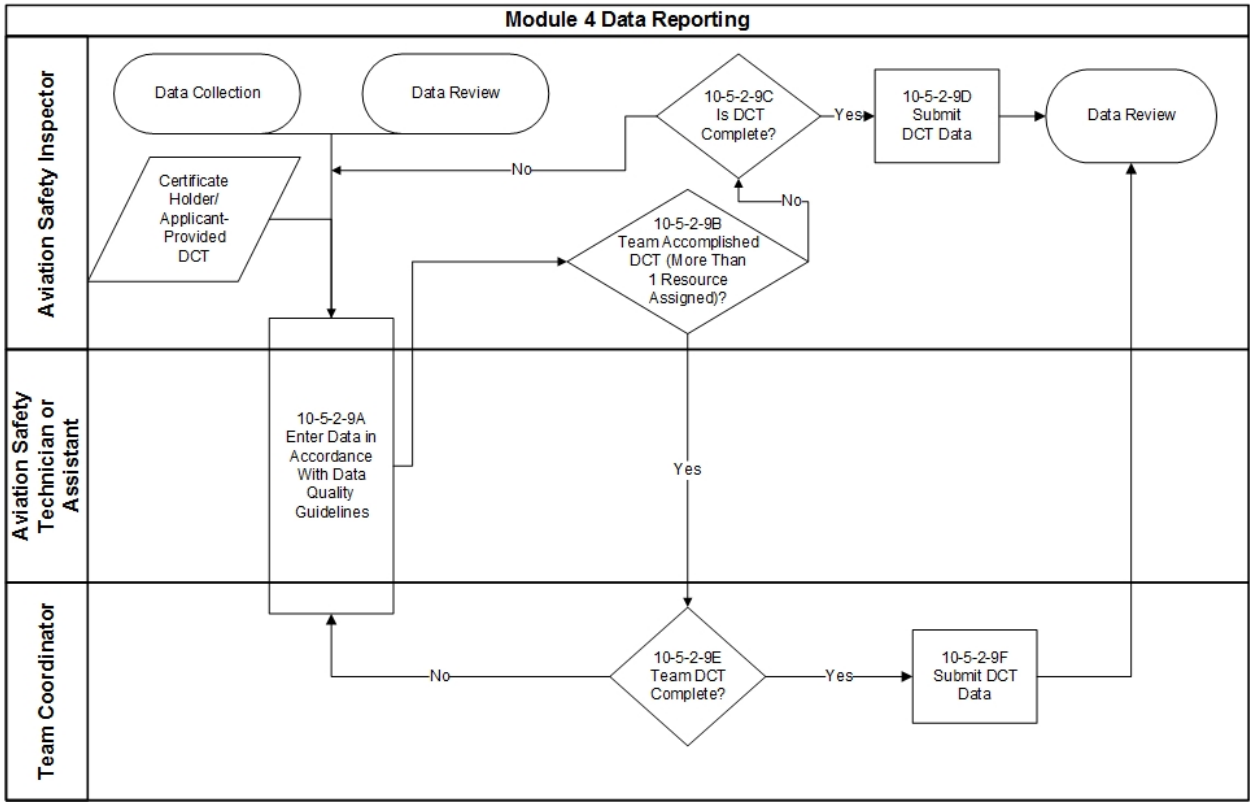
10-5-2-7 DATA REPORTING.

Figure 10-5-2A. Module 4 Data Reporting Process Flowchart



10-5-2-9 PROCEDURES.

A. Enter Data in Accordance with Data Quality Guidelines (see flowchart process step 10-5-2-9A). The ASI, AST, or ASA records the DCT responses and Dynamic Observation Report (DOR) data into the automation in accordance with the DQG. The data should be entered within 5 business-days of completing the data collection or as soon as possible. The ASIs, ASTs, and ASAs have the ability to record DCT data in the current quarter even if scheduled for a future quarter.

1) Entering Common Data Fields. The common data fields are customized based on the type of DCT and 14 CFR part. Refer to the SAS Automation User Guide (AUG) for more information on how to enter data into the common data fields.

a) The common data field, “Related/Affiliated Designator,” is used to document the designators of a certificated agency performing services for the certificate holder. If surveillance activities do not include other certificated agencies, then “N/A” can be selected.

b) For random inspections (RI), record the aircraft model, N-number, and flight number, if available, in the automation.

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2) Data Collection. The ASI must provide enough information for a thorough assessment by the principal inspector (PI) or certification project manager (CPM). Only record factual data, not interpretation or personal opinion. A PI/CPM may request additional data collection before, during, and after all data reporting for the DCTs.

3) Duplicating Questions for System or Subsystem Performance Data Collection Tool (SP DCT) or Element Performance Data Collection Tool (EP DCT). The ASI has the option to duplicate questions within the same DCT for multiple inspections. If duplicate questions are used, the ASI has the option to change the common data fields.

4) Add Related Element Level Questions. When conducting an SP DCT, ASIs can view the related EP DCT using the "Related Element Questions" link. If the ASI determines that additional information is needed to answer or validate an answer for an SP DCT question, the ASI selects the "add EP DCT" option and that EP DCT is added to the ASI's Individual Work Plan (IWP). Not all the EP DCT questions have to be answered: only the ones the ASI determines are necessary.

5) Off Hour. Select this field when off-hour surveillance is conducted. Off-hour surveillance is defined as activities that occur outside of normal FAA duty hours, including weekends.

6) PI Alert. The PI alert is a tool used by the ASI to alert the PI of concerns identified during data collection. The PI alert is available in EP DCTs, SP DCTs, En Route C DCTs, and RI C DCTs. The ASI must enter a comment in the "Comment" box to explain the reason for the alert. A PI alert notification is sent to the PI when a DCT contains at least one PI alert. The notification appears under the "Data Review" category on the notifications tile in SAS automation.

7) Add Action. This feature is only available to the PI/CPM. The action choices are located in Volume 10, Chapter 6, Section 2.

8) DORs. The DOR is used to record an unfavorable observation of performance outside the planned oversight process. A DOR has two options: Question-Based or "No Applicable Questions." The Question-Based DOR is used when SP or EP DCT questions exist that are related to the observation. If no SP questions relate to the observation, select "No Applicable Questions." The Flight Standards Service can use a DOR to notify the Office of Hazardous Materials Safety (AXH) when documenting a hazardous materials (hazmat) safety issue for parts 121, 129, and 135 by selecting the "AXH" organization in the automation. AXH has the ability to notify the Flight Standards Service of any safety issue by submitting a DOR for parts 121 and 135.

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9) Inspector Action Taken Field. Action taken by the ASI must be documented in this field. ASI actions include, but are not limited to: consulting with certificate holder or applicant personnel to effect an action, notifying the PI or CPM of safety issues or regulatory noncompliance, or notifying the appropriate certificate holder or applicant personnel of a potential noncompliance. Follow the Compliance Action Decision Process (CADP) in Volume 14, Chapter 1, Section 2 when determining the appropriate course of action and see Table 10-5-2A below for documenting Compliance Actions.

Table 10-5-2A. Documenting Compliance Action When the Inspector Takes Action

DCT Type	Where Do I Put the Comments?	What Comments Do I Include for Compliance Action?
RI	Inspector Action Taken	• What did you do to communicate or transfer your concerns and risks? (Make reference to any verbal discussions, phone calls, letters, or emails attached.) • Who did you tell? • What were the mitigations/actions taken by the FAA? (Counseling, On-the-Spot, Other with explanation.) • See Volume 14, Chapter 1, Section 2 for additional documentation details.
En Route Inspection	Inspector Action Taken	
DOR	Inspector Action Taken	
C DCT (PI or National/Divisional)	Inspector Action Taken	
SP DCT	Inspector Action Taken	
EP DCT	Inspector Action Taken	
ED DCT	Supporting Comments	

10) Response Details Field. If an unfavorable, not applicable, or not observable response is selected, then select all options that apply from the “Response Details” expanded menu of standard responses. If the available choices do not adequately describe your observation, select “Other” and provide an explanation in the “Supporting Comments” field. When selecting “Not applicable” or “Not observable,” document in the “Supporting Comments” field the portion of the surveillance that was not applicable or the portion of the surveillance that was not observable and why. See Table 10-5-2B, Data Collection Tool Response Details, for the Response Details for DCT type and response type.

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Table 10-5-2B. Data Collection Tool Response Details

DCT Response Details for Unfavorable Responses	DCT Response Details for Not Applicable (N/A) Due to	DCT Response Details for Not Observable (N/O)
• Unclear procedure(s). • Conflicting procedure(s). • Used workaround(s). • Personnel failed to follow process. • Procedures/guidance not available. • Procedures/guidance not current. • Inconsistent procedure(s). • Undocumented procedure(s). • Minor typographical error(s). • Information missing. • Communication failure(s). • Personnel failed to perform task. • Process failed to meet desired outcome. • Process oversight failure. • Equipment tools not available/appropriate. • Facilities not appropriate. • Other.	• Operator not authorized by operations specification (OpSpec). • Equipment not equipped/authorized. • Not applicable due to exemption, deviation, or exception. • Not authorized by regulation. • Not authorized by order. • Not authorized by notice. • Not authorized/ recommended by advisory circular (AC). • Not authorized by policy letter, legal interpretation, or other guidance. • Other.	• Personnel (e.g., key certificate holder personnel not present/available). • Equipment (e.g., equipment not present/available/ in serviceable condition). • Event did not occur (e.g., did not observe an intoxicated passenger on the flight). • Time constraints (e.g., resources/workload). • Weather (e.g., weather needed for observation not present or weather made observation impossible). • Other.

11) Corrected on the Spot Selection. The ASI may request that the certificate holder or applicant correct an issue on the spot. If "Corrected on the Spot" is available in the DCT or C DCT for an En Route inspection and RI, the ASI selects "Corrected on the Spot" and documents his or her action in the "Inspector Action Taken" field. The corrective action taken by the certificate holder will be recorded in the "Supporting Comments" field. See Volume 14, Chapter 1, Section 2 to determine possible Compliance Action or enforcement proceedings.

12) Recording Responses to Questions as Unfavorable or Favorable/Supporting Comments. Explanations must be complete and descriptive so that anyone knowledgeable within the industry can understand the response without requiring additional information. Read the question thoroughly and answer it based on the performed activity. Unfavorable responses require an explanation of the "who, what, where, and when" that caused the response. Unfavorable responses may indicate Safety Attributes did not achieve the desired outcome. For questions that are regulatory, list the regulatory requirement when documenting unfavorable responses. For example, if procedures were not followed or checklist steps may have been skipped, this outcome could indicate potential risk in the certificate holder/applicant systems. Unfavorable responses provide valuable data to the PI/CPM that when analyzed with other data,

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may lead to increased oversight, even though the certificate holder or applicant did not violate any regulations. Volume 14, Chapter 1, Section 2 has specific requirements on the documentation needed to record a Compliance Action.

NOTE: Some questions contain bulleted sub-questions. When answering these types of questions, if all sub-questions are favorable, a single favorable response can be given. If any bulleted sub-question is unfavorable, the automation requires each sub-question to be answered individually. If a sub-question does not apply, the question can be answered as favorable and comments added stating what did not apply.

a) A single unfavorable answer does not necessarily mean an unsafe condition or a regulatory violation has occurred, unless that question has a regulatory basis.

b) For all DCTs with unfavorable responses, including Safety Attribute questions, use the "Supporting Comments" field to provide a description of why the question was answered with an unfavorable response. Include in your comments the answers to the following questions: What was the requirement? Where did you look? What did you find? What corrective actions did the certificate holder/applicant take? Select a category from the "Response Details" drop-down menu that best describes the unfavorable response. The ASI has the option to upload documents.

c) For all ED DCTs answered with a favorable response, the "Design/Manual Reference" comment box should include a reference to the manual, chapter, section, and page number(s) or a description that describes how the certificate holder meets the intent of the question.

d) When a system-level Safety Attribute question has an unfavorable response (e.g., a controls question for System 6.0 Ground and Station Operations), you may record the associated element in the "Supporting Comments" field to better define the area of concern (e.g., "6.4.1 Operations in Ground Icing controls were ineffective…").

e) If the ASI/PI selects an unfavorable response, then see Table 10-5-2C, Documenting Compliance Action Details for Unfavorable Responses When No Action is Taken, on how to document Compliance Action.

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Table 10-5-2C. Documenting Compliance Action Details for Unfavorable Responses When No Action is Taken

DCT Type	What Comments Do I Include for Compliance Action?	Where Do I Put the Comments?
RI	• What specific (guidance, safety, manual, regulatory, or statutory) requirement was not met? • Who was involved? • When did it occur? • Where did it occur? *In addition, include the following if known prior to closing the DCT to support managing Compliance Action in the Analysis, Assessment, and Action (AAA):* • What are the results of the Root Cause Analysis (RCA)? (Why did it occur, what caused the error?) • What were the identified hazards or ineffective risk controls? (Include behaviors that led to the problem.) • How was the problem corrected? (Document mitigations/corrective actions taken by the certificate holder.) • See Volume 14, Chapter 1, Section 2 for additional documentation details.	Supporting Comments
En Route Inspection		
DOR		
C DCT (PI or National/Divisional)		
SP DCT		
EP DCT		
ED DCT		

13) Entering Data Provided by the Certificate Holder or Applicant.
The certificate holder may use the external portal to submit completed ED DCTs. The PI can view and accept the certificate holder's submitted ED DCTs from the "Review DCT" tab by selecting "Approve DCT." This allows the certificate holder's ED DCT responses to be available to the ASI and viewable by selecting "View Prior Response." The ASI may select the certificate holder's provided responses or enter ASI findings. A checkmark in the "CH/A Provided" box indicates responses that have been provided from the certificate holder. Data collected by the certificate holder must meet the following requirements:

a) For initial certification, the applicant must fill out the required ED DCTs using the external portal and Module 4.

b) For change requests, the certificate holder can voluntarily complete the appropriate ED DCTs as a self-audit.

c) Once the ED DCT is complete, accurate, and adheres to the data requirements, the PI/CPM approves the DCT. Once the DCT is approved, the ASI assigned to that element is able to view the certificate holder's or applicant's responses to the questions.

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14) Program Tracking and Reporting Subsystem (PTRS) Code Usage. Surveillance activities are captured in SAS. Certificate management activities required by this order may be captured in the PTRS.

15) Using an ED DCT or C DCT Instead of PTRS. PIs/ASIs may choose to record certificate management functions, such as manual revisions, that impact an approved or accepted program using an ED DCT or C DCT instead of the PTRS.

16) Recording the FAA Form 8430-13, Request for Access to Aircraft. If conducting an SP DCT, EP DCT, or C DCT that requires an En Route, then record the FAA Form 8430-13 number in the SP DCT, EP DCT, or C DCT. For all other travel, record the FAA Form 8430-13 number in the cockpit or cabin En Route inspection. You may record the same FAA Form 8430-13 in both SAS and the PTRS, if required by the activity.

17) DQG. See Volume 10, Chapter 5, Section 3 for the DQG.

B. Team Accomplished DCT (More Than 1 Resource Assigned)? (see flowchart process step 10-5-2-9B). If the Frontline Manager (FLM) assigned a team to accomplish the DCT, see Step 10-5-2-9E, Team DCT Complete. If the FLM did not assign a team to accomplish the DCT, see Step 10-5-2-9C, Is DCT Complete.

C. Is DCT Complete? (see flowchart process step 10-5-2-9C). The ASI is the first level for assuring data quality. Validation of data includes the use of spell check in the common data field to help to minimize data entry errors. Upload supporting documents and ensure each DCT answer includes common data fields, a start date, end date, and location. Review all DCT reports to ensure the PI/CPM instructions were followed.

D. Submit DCT Data (see flowchart process step 10-5-2-9D). Once the ASI determines that the DCT is complete, accurate, and adheres to the DQG, then the ASI submits the DCT. The data should be entered within 5 business-days of completing the data collection, or as soon as possible. The DCT must be submitted by the due date, or per PI instructions. Once the DCT has been submitted and the DQR has started the review of the DCT, it cannot be changed unless the DCT is returned by the DQR.

E. Team DCT Complete? (see flowchart process step 10-5-2-9E). During the DCT reporting process, the TC reviews the DCTs and/or questions that the team members completed. The TC verifies that the DCTs are ready to be submitted by ensuring the team members:

- Uploaded supporting documents,
- Followed PI or CPM instructions, and
- Populated all required common data fields so that he or she can submit a complete assessment.

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F. Submit DCT Data (see flowchart process step 10-5-2-9F). Once the TC determines that the DCT is complete, accurate, and adheres to the DQG, the TC submits the DCT. The TC submits data within 5 business-days of completing the DCT, or as soon as possible. Once the DCT has been submitted and the DQR has started the review of the DCT, it cannot be changed unless the DCT is returned by the DQR. After the PI completes the Analysis, Assessment, and Action (AAA), the DCT cannot be returned.

10-5-2-11 through 10-5-2-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 5 DATA COLLECTION, DATA REPORTING, AND DATA REVIEW

Section 3 Safety Assurance System: Module 4 Data Review

10-5-3-1 GENERAL.

A. Purpose. The data review process ensures quality data is entered into the Safety Assurance System (SAS) automation for the analysis and assessment of certificate holders or applicants.

B. Scope. This section applies to Office Managers (OM), Frontline Managers (FLM), and data evaluation program managers (DEPM) who are assigned the role of Data Quality Reviewer (DQR).

C. Module 4. In the Data Review Module, the DQR will:

- Review the Data Collection Tool (DCT),
- Determine whether data collection and data reporting meet requirements,
- Submit the DCT,
- Return and provide feedback on data,
- Determine if there is agreement, and
- Determine if there are data collection issues.

10-5-3-3 RESERVED.

10-5-3-5 BACKGROUND. SAS encompasses the certification, routine surveillance, and certificate management processes for certificate holders. It assesses the safety of Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 145 certificate holders' operating systems using system safety principles, Safety Attributes, and risk management (RM). SAS also assesses the requirement to provide service at the highest level of safety in the public interest. Module 4 contains the processes for data review.

A. Data. Data is a set of facts that represent real-world objects that, when compiled, provide information for decision making. Data that conforms to a defined specification, that correctly reflects the intended use, is quality data.

B. Need for Quality Data. Quality data provides a reliable measurement for the principal inspector (PI)/certification project manager (CPM) to assess the design and performance of a certificate holder's or applicant's system. Poor-quality data is incoherent and does not reflect real-world conditions. Even accurate data that is redundant or not interpretable by the user is of little value. Deficient data is mostly unusable. Poor-quality data can impact operational cost, cause difficulty in setting and executing strategy, and create less effective decision making.

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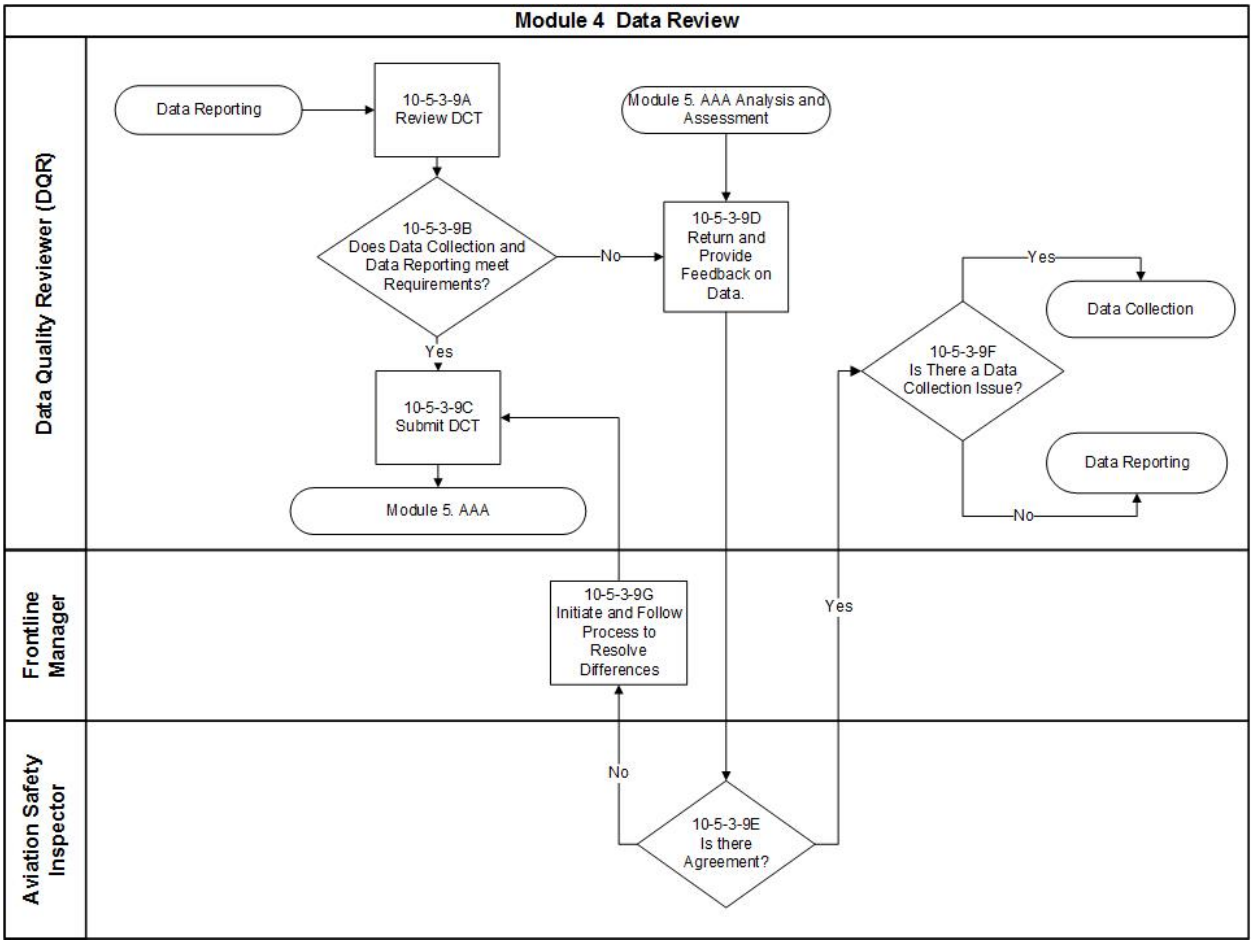
C. Measuring Quality Data. Commonly used characteristics or dimensions to measure data quality include accuracy, appropriate amount of data, completeness, consistency, ease of understanding, objectivity, relevance, timeliness, and validity. SAS automation contains most of the controls to ensure data quality. However, aviation safety inspectors (ASI) play an important role by incorporating data quality guidelines (DQG) when they report data. Before submitting a DCT for data quality review, ASIs should review the data to reduce the possibility of the DCT being returned for corrections.

D. En Route and Random Inspection (RI) Data. En Route and RI Custom Data Collection Tools (C DCT) will require data review for the following data collection responses:

- Unfavorable,
- PI Alert,
- Corrected on the Spot, and
- Inspector Comments.

10-5-3-7 DATA REVIEW.

Figure 10-5-3A. Module 4 Data Review Process Flowchart



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10-5-3-9 PROCEDURES.

A. Review DCT (see flowchart process step 10-5-3-9A). The "Review DCT" process consists of four steps:

1) The first step is conducted when the ASI reviews his or her responses and compares them to the DQG.

2) The second step is conducted when the ASI selects "Check DCT."

a) The "Check DCT" function validates the following items:

- Missing required fields both in questions and common data fields;
- Unanswered questions;
- Flagged questions by the user; and
- Spelling errors both in questions and common data fields.

b) During this step, the automation will require the ASI to correct all the errors before being able to submit the DCT with the following exceptions:

- The automation will indicate to the user which words are misspelled. This will allow the ASI to correct spelling errors.
- The ASI will not have to complete all the questions in an Element Performance Data Collection Tool (EP DCT) that was added as part of reporting data for a System or Subsystem Performance Data Collection Tool (SP DCT).

c) For team DCTs, the team member is able to check or review only those questions that he or she has answered. The team coordinator (TC) sees all of the questions and is informed of any questions that were unanswered. Only the TC is able to submit the DCT.

3) The DQR conducts the third step. The DQR will begin data review when notified by the automation that the items are ready. Not all of the DCTs require DQR review; however, it is advisable that the DQR review all DCTs that have an unfavorable response to a Specific Regulatory Requirement (SRR)-based question to ensure that the data meets the DQG. A "Y" in the text column indicates that there are supporting comments and/or an attachment to review. Once the DCT is submitted and the DQR has started the review, the ASI will not be able to make any changes to that DCT unless the DQR returns the DCT to the ASI. After the PI completes the Analysis, Assessment, and Action (AAA), the DCT cannot be returned. The DQR should conduct the review within 7 calendar-days of submission. The following are some of the items the DQR should review and consider:

a) Use the DQG table as a reference when reviewing responses, comments, and attachments (see Table 10-5-3A, Data Quality Guidelines).

b) Review PI instructions on the "Prepare DCT" tab to ensure the ASI followed instructions.

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c) A “not observable” (N/O) response can be used throughout the DCT to include duplicate questions. It is no longer a requirement to use an “N/O” for the last activity, since SAS automation does not track activities.

d) For specific questions that do not meet the DQG, the DQR should place a comment specific to that question and use the DQG reference (e.g., accuracy, value-added, etc.), as appropriate.

e) When you (the DQR) return the DCT to the ASI, make sure to include the specific question(s) and any other relevant information so the ASI will know what he or she needs to review/revise. The ASI will receive a notification on his or her Individual Work Plan (IWP) when a DCT is returned.

f) The DQR should identify themselves in their comments and ensure the data evaluation comments of another DQR are not deleted.

4) The PI/CPM conducts the final data quality review during the AAA process.

B. Does Data Collection and Data Reporting Meet Requirements? (see flowchart process step 10-5-3-9B). If the DCT meets the DQG, then see Step 10-5-3-9C, Submit DCT. If the DCT does not meet the DQG, then see Step 10-5-3-9D, Return and Provide Feedback on Data (see Table 10-5-3A).

C. Submit DCT (see flowchart process step 10-5-3-9C). The DQR submits the data to the AAA when the data meets the DQG.

D. Return and Provide Feedback on Data (see flowchart process step 10-5-3-9D). If the DCT needs to be returned to the ASI, then the DQR records the reason why the DCT was returned (see Step 10-5-3-9F, Is There a Data Collection Issue?). If, during the AAA, the PI or CPM finds data issues or needs more information, then record the reason why the DCT was returned.

E. Is There Agreement? (see flowchart process step 10-5-3-9E). The ASI evaluates the returned DCT and the reasons why it was returned. If the ASI agrees with the reasons why the DCT was returned, then he or she decides on the appropriate action (e.g., editing the record and conducting additional observations). If the ASI disagrees with the reasons why the DCT was returned, then see Step 10-5-3-9G, Initiate and Follow Process to Resolve Differences.

F. Is There a Data Collection Issue? (see flowchart process step 10-5-3-9F). If there are data collection (quantity) issues (e.g., not enough data collected), then the DCT is returned to the ASI in Data Collection to collect additional data. If there are data reporting (quality) issues (e.g., not per DQG), then the DCT is returned to the ASI in Data Reporting to resolve these data quality issues.

G. Initiate and Follow Process to Resolve Differences (see flowchart process step 10-5-3-9G). If the ASI disagrees with the DQR and/or the PI/CPM, then the OM may delete or edit the data. When the OM deletes or edits an employee’s data due to a professional difference of opinion, they will annotate in the supporting comments who made the change, when the change was made, and why. The OM must notify the ASI of any changes made to the original record. If the issue is resolved, then see Step 10-5-3-9C, Submit DCT.

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Table 10-5-3A. Data Quality Guidelines

Data Quality Guidelines (DQG)		
DQG	**Definition**	**Measurement Examples**
Is the information accurate?	Data must be technically correct, understandable, and error free.	All explanations and comments must be in complete sentences and spelled correctly. Include Code of Federal Regulations (CFR) and other references, where appropriate.
Is there enough data to respond to the question?	Principal inspectors (PI)/certification project managers (CPM) may recommend a minimum number, location, and scope of inspection activities. The number of activities required to properly assess a given system/subsystem or element may vary considerably. There should be sufficient data to answer all the questions and to provide a thorough assessment by the PI/CPM. The inspections should vary across time and location to obtain sufficient amounts of quality observations to reflect the performance of the system/subsystem or element.	Ensure there is enough data to answer all questions. This may vary depending on the complexity and the size of the certificate holder and other factors. The aviation safety inspector (ASI) must follow the PI's instructions.
Do you understand the data?	Data must be clear and comprehensible.	Write explanations and comments in clear, concise language. Only use commonly understood abbreviations or acronyms. Explanations and comments must be complete and descriptive so that someone knowledgeable within the aviation industry can understand. Unfavorable responses must answer the following questions: What was the requirement? Where did you look? What did you find?
Is the data objective?	Data must be unbiased.	Explanations must be statements of fact or fact-based conclusions from actual observations.

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Data Quality Guidelines (DQG)		
DQG	**Definition**	**Measurement Examples**
Is the data relevant?	The data should be applicable to the observation or question.	The response, explanation, or comment should directly relate to the specific questions asked and the response for that question. The methodology used to collect the data was appropriate. Explanations and comments should not include administrative information to support favorable responses (e.g., “James Doe completed initial operating experience satisfactorily”).
Is the data timely?	The age of the data must be appropriate for the task. Do not leave the record open as a means to collect information that may present itself in the future.	Enter your responses within 5 business-days of completing the data collection or as soon as possible. Complete Data Collection Tools (DCT) within the timeframes the PI or CPM specified.
Does the data add value?	Data should be beneficial and provide advantages from its use.	Do not enter the word “None” as an explanation. Each explanation and comment must stand alone and not refer to the response for another question (e.g., “See above” or “Same as question 3”). ASIs should not enter a description of what they did to complete the particular inspection activity reported; only details that are needed to support observations and findings.

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Data Quality Guidelines (DQG)		
DQG	**Definition**	**Measurement Examples**
Are the departure point and arrival point accurate?	Enter the three-letter FAA airport identifier for airports within and between the 50 United States using all capital letters. Enter the four-letter International Civil Aviation Organization (ICAO) airport identifier for airports outside of the 50 United States using all capital letters. Do not use Official Airline Guide (OAG) or air carrier-created identifiers.	Use “SFO” for San Francisco International Airport. Use “EGLL” for the London-Heathrow airport instead of the “LHR” OAG identifier. PIT-CYUL; Pittsburgh, PA to Montreal. This normally applies only outside of the 50 United States. Use “MMMX” for Mexico City instead of the “MEX” OAG identifier. NOTE: If the automation does not list a four-letter airport identifier for a foreign airport, use the three-letter identifier.
When Compliance Action is required, do comments and information meet the requirements of Volume 14, Chapter 1, Section 2?	Comments must include a description of the problem and what actions were taken. Comments and information should answer the “Who, What, When, Where, and Why.” Comments must document any immediate corrective action taken by the certificate holder showing the noncompliance ceased.	See Volume 14, Chapter 1, Section 2. See Volume 14, Chapter 1, Appendix 14-4, Compliance Action Documentation Review Job Aid. The Data Quality Reviewer (DQR) may review all DCTs that have an unfavorable response to a Specific Regulatory Requirement (SRR)-based question.

10-5-3-11 through 10-5-3-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 6 ANALYSIS, ASSESSMENT, AND ACTION

Section 1 Safety Assurance System: Module 5 Analysis and Assessment

10-6-1-1 GENERAL. This chapter includes information about the Analysis, Assessment, and Action (AAA) process for Performance Assessments (PA) and Design Assessments (DA). PAs determine if the certificate holder's or applicant's system performs as intended by regulations in such a way that a safety risk is being managed to an acceptable level. DAs determine if the certificate holder's or applicant's system design meets the standards for acceptance or approval. This process uses data collected by aviation safety inspectors (ASI). The principal inspector (PI) or certification project manager (CPM) may use data from other sources to help make the assessment. The action process requires the PI/CPM to determine and document the appropriate course of action based on the result of the analysis and assessment.

NOTE: The AAA process described in this chapter aligns with the Compliance Action requirements of Volume 14, Chapter 1, Sections 1 and 2. The action choices listed in Volume 10, Chapter 6, Section 2 are all acceptable methods of addressing noncompliance at its source. Volume 10 and Volume 14 guidance must be followed to document Compliance Actions in the Safety Assurance System (SAS).

NOTE: Security is an important feature of the SAS automation. If you, as a SAS user, detect a security breach or there is an indication of a security risk, you should immediately notify the office SAS Security Auditor or SAS Administrator. See Volume 10, Chapter 1, Section 1, Subparagraph 10-1-1-5I, Security Risks, for more information.

A. Purpose. The PI/CPM analyzes collected data and makes an assessment determination about whether to approve, accept, or reject the performance or design of a certificate holder's or applicant's programs.

B. Scope. In Analysis and Assessment, the PI/CPM will:

- Analyze data,
- Determine if there is enough data,
- Decide if there are data review issues,
- Make an assessment,
- Decide if action is required, and
- Determine if acceptance/approval is required.

10-6-1-3 RESERVED.

10-6-1-5 BACKGROUND. SAS encompasses certification, routine surveillance, and certificate management processes for the Federal Aviation Administration (FAA) to perform oversight of certificate holders. It assesses the safety of Title 14 of the Code of Federal

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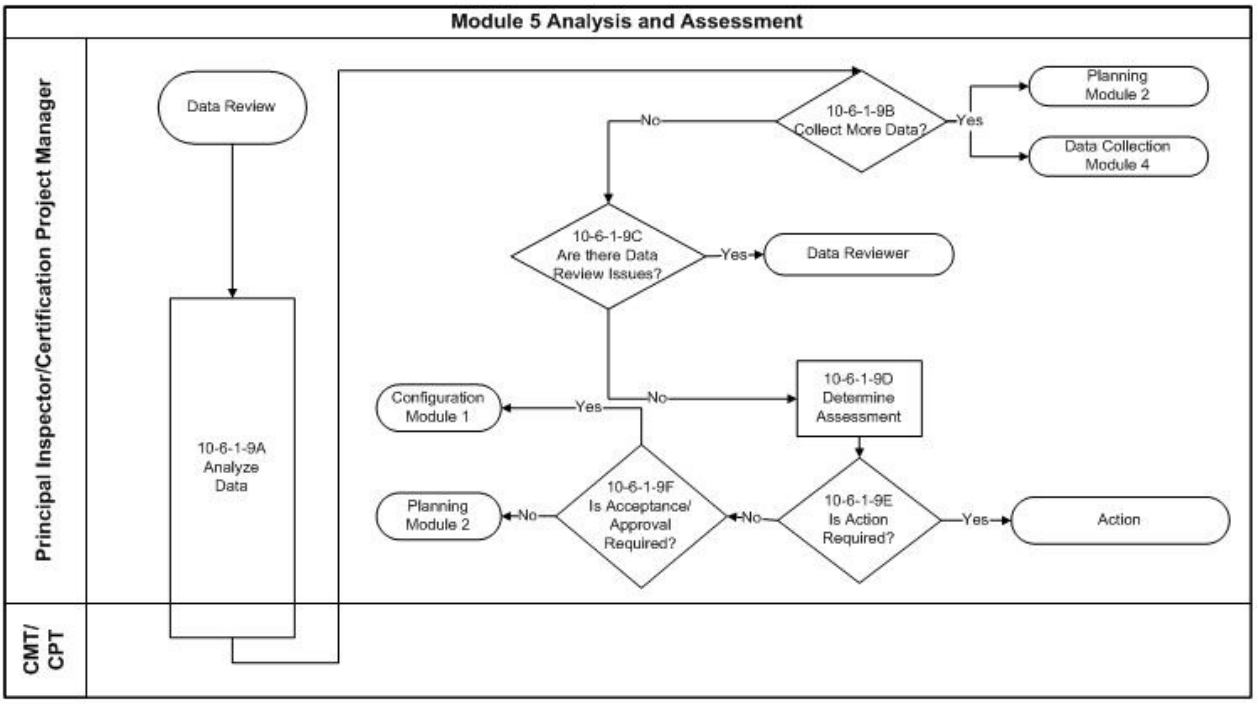
Regulations (14 CFR) parts 121, 135, and 145 certificate holder's operating systems using system safety principles, Safety Attributes, and risk management (RM). SAS also assesses the requirement to provide service at the highest level of safety in the public interest. The Analysis and Assessment Module contains the processes for making a decision about whether to approve, accept, or reject the performance or design of a certificate holder's or applicant's programs.

10-6-1-7 ANALYSIS AND ASSESSMENT.

Figure 10-6-1A. Module 5 Analysis and Assessment Process Flowchart



10-6-1-9 PROCEDURES. This section describes the steps for the Analysis and Assessment process of the AAA. All assessments are due at the end of the quarter and are considered complete if the assessment occurs within 30 calendar-days of the due date.

A. Analyze Data (see flowchart process step 10-6-1-9A). During this step, the PI/CPM analyzes the data collected in the Data Collection Module to determine if there is enough data to make an assessment determination. The PI/CPM can review the data even if one of the Data Collection Tools (DCT) is still in progress. Review the following data and reports to determine if there is enough data to make an assessment determination. There may be scenarios when the same unfavorable finding is documented in multiple locations. This is possible within the same DCT or when System or Subsystem Performance Data Collection Tool (SP DCT) and Element Performance Data Collection Tool (EP DCT) questions document the same unfavorable finding. If this occurs, it should be considered when making the assessment determination. The principal maintenance inspector (PMI) and principal avionics inspector (PAI) should collaborate to complete the analysis when they have a shared certificate holder.

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1) Safety Performance Analysis System (SPAS). Provides detailed information for the selected element, system, or subsystem.

2) Findings Report. The Findings Report defaults to questions with unfavorable responses from all the associated DCTs within that assessment. The report includes all related PI-created Custom Data Collection Tools (C DCT), Essential Maintenance Provider (EMP) inspections, En Route and random inspections (RI), and Dynamic Observation Reports (DOR).

3) Historical Data Report. This report lists all of the previous assessment results.

4) Responses Listed by Question Attribute. This report is organized by question and response type. The "Regulatory Finding" is based on FAA regulations and/or guidance. If automation reads an unfavorable response from the "Procedures" questions, which may contain both regulations and guidance, it records it as "Regulatory." To determine if the finding is regulatory- or guidance-based, PIs will need to review the DCT. Not all unfavorable responses require Compliance Action. PI instructions should instruct ASIs to include the regulation (if finding is regulatory) in the comment section if they answer "unfavorable." The other Safety Attribute questions (i.e., Responsibility, Authority, Controls, Process Measurement, Interfaces, and Safety Ownership) may be nonregulatory.

5) Attributes Report. This report categorizes the responses based on Safety Attribute.

6) Response Listed by DCT Report. This report lists all of the DCT responses associated with an assessment. Part 145 PIs can view the parts 121 and 135 DCTs rolled up in the AAA by selecting the assessment performed at the EMP during coordinated surveillance.

7) Certificate Holder Assessment Tool (CHAT). The CHAT Report contains the certificate holder or applicant risk indicators and associated actions, and can be used to prevent duplication of previous actions and identify systemic issues.

8) SAS Reports. A list of these reports is located in the SAS Automation User Guide (AUG).

9) Operations Research Analyst (ORA). The PI/CPM may request an ORA to generate additional reports to assist with the analysis of the data. For example, the PI/CPM may request an ORA to help analyze data from a Commercial Aviation Safety Team (CAST) Safety Enhancement (SE) report.

B. Collect More Data? (see flowchart process step 10-6-1-9B). The PI/CPM reviews the data to determine if enough data exists to make an assessment determination. If the data is sufficient to make an assessment determination, then see Step 10-6-1-9D, Determine Assessment. If more data is needed, then the PI/CPM has two options:

1) If the PI/CPM determines that additional DCTs are needed, then the PI/CPM goes to the Comprehensive Assessment Plan (CAP) and adds the DCTs. When this step occurs, the assessment is automatically extended an additional quarter.

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2) If the PI/CPM determines the ASI needs to collect more data on an existing DCT, then the PI/CPM sends the DCT back to Data Collection with an explanation of what the ASI needs to accomplish. When this step occurs, the assessment is not automatically extended an additional quarter.

C. Are There Data Review Issues? (see flowchart process step 10-6-1-9C). If there is quality data to make an assessment, then see Step 10-6-1-9D, Determine Assessment. If the PI/CPM determines that the data submitted is not of a quality to allow them to make an assessment determination, then the PI/CPM returns the DCT to the Data Quality Reviewer (DQR) with a detailed explanation of what items need to be addressed. The DQR returns the DCT to the ASI who collected the data.

D. Determine Assessment (see flowchart process step 10-6-1-9D). During this step, the PI/CPM makes an assessment determination and must provide justification for the selection, unless there were no issues or findings. An assessment determination consists of making a judgment and conclusion regarding the certificate holder's or applicant's performance and design. The PI/CPM may convene a meeting to review data to assist in making the assessment. The automation allows the PI/CPM to make an assessment determination as long as the data review is complete, even when the DCT is scheduled for a future quarter in the CAP. If the assessment is completed early, then the baseline interval is reset.

1) Shared Assessments. The PMI and PAI should collaborate to complete the AAA assessment determination when they have a shared certificate holder.

2) Assessment Determination Options. Before the PI/CPM accepts or approves a certificate holder's or applicant's system with mitigation, the PI/CPM must determine the extent of the deficiencies and identify hazards that may exist. For example, some hazards are isolated incidents that are typically related to performance and do not necessarily require system-level changes; however, there may be an indication of systemic hazards. Systemic hazards may indicate defects in the design of the certificate holder's or applicant's processes (e.g., missing procedures, poor controls, or lack of attention to interfaces), patterns of repeated noncompliance with procedures, or significant changes in the operating environment. Controlling or eliminating systemic hazards requires modifications to the system design. The PI/CPM considers the options in Table 10-6-1A, Assessment Determination Options, when making an assessment determination of a certificate holder's or applicant's design or performance.

3) Assessment Determination Justification. Once the PI/CPM has made the assessment determination, they must provide justification for their selection in the "Assessment Determination Justification" field, unless there were no issues or findings. This field should contain the reason why the specific assessment determination was selected and what specific issues were related to the decision process. The PI/CPM should provide a sound reason and facts in the justification field that support the assessment determination option. Frontline Managers (FLM)/Office Managers (OM) may verify the assessment determination, justification, and action selections made by the PI/CPM.

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4) Validation of Assessment. Once the PI/CPM makes an assessment determination, the automation validates if the assessment corresponds to the DCT responses. The automation notifies the PI/CPM if it detects a possible conflict between the assessment determination and the DCT responses. For example, if there are unfavorable responses and the PI/CPM chooses "No issues or findings observed," then the PI/CPM needs to determine if there is a need to revise the assessment determination. Once the conflict is resolved, the automation changes the status of the assessment determination to show it as complete.

5) Compliance Action. If the PI/CPM selects 2–4 as an assessment determination, then an action must be added. The "Regulatory Compliance Action" choice is only available when 3 or 4 is selected. Justification for the action selected will be documented in the "Action Justification" comment box. The PI/CPM will refer to Volume 14 for a determination of Compliance Action. The PI/CPM will consider if the risk was addressed and mitigated at the point of discovery or if the underlying issue(s) warrants further correction and/or followup action. When the risk is mitigated at the point of discovery, "Regulatory Compliance Action" must still be selected so that the action items are tracked on the Action Item Tracking Tool (AITT) under "Manage Corrective Actions and Events."

E. Is Action Required? (see flowchart process step 10-6-1-9E). If the PI/CPM decides that action is required, which includes action to address regulatory noncompliance in accordance with Volume 14, then see Volume 10, Chapter 6, Section 2 for information on action choices. If the PI/CPM decides no action is required, then see Step 10-6-1-9F, Is Acceptance/Approval Required?

F. Is Acceptance/Approval Required? (see flowchart process step 10-6-1-9F).

1) The PI/CPM can close the assessment and approve or accept the program if they determine that the certificate holder's or applicant's performance or design meets the requirements. (See Volume 10, Chapter 2, Section 1.)

2) If the CPM determines the applicant's performance or design does not meet the requirements, then the CPM may plan future Element Performance Assessments (EPA) or C DCTs prior to issuing the certificate. (See Volume 10, Chapter 3, Section 1.)

3) If the PI determines the certificate holder's performance or design does not meet the requirements, then the PI may plan future EPAs, Element Design Assessments (EDA), or C DCTs prior to approving the program. (See Volume 10, Chapter 2, Section 1 and Volume 10, Chapter 3, Section 1.)

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Table 10-6-1A. Assessment Determination Options

Option	Assessment Analysis	Assessment Findings	Action
1	**Performance or Design Affirmed**	**No issues or findings observed**	**No action required**
2	**Performance or Design Affirmed**	**Minor, nonregulatory issues observed**	**Action required**
3	**Performance or Design Affirmed**	**Non-systemic regulatory issues observed**	**Action required**
4	**Performance or Design Not Affirmed with Action Required**	**Regulatory and/or Systemic issues observed**	**Action required**

NOTE: Any of the assessment determination options may be selected for safety issues. The colors in Table 10-6-1A correspond to the automation assessment determination results based on the analysis of available data.

10-6-1-11 through 10-6-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 6 ANALYSIS, ASSESSMENT, AND ACTION

Section 2 Safety Assurance System: Module 5 Action

10-6-2-1 GENERAL.

A. Purpose. Determine the action that the principal inspector (PI)/certification project manager (CPM) needs to take based on the results of their analysis and assessment.

B. Scope. In the Action Module, the PI/CPM will:

- Determine the appropriate action to take;
- Initiate and manage the Action Item Tracking Tool (AITT);
- Perform configuration change if necessary; and
- Update the Comprehensive Assessment Plan (CAP) and/or the Certificate Holder Assessment Tool (CHAT).

10-6-2-3 RESERVED.

10-6-2-5 BACKGROUND. The Safety Assurance System (SAS) encompasses certification, routine surveillance, and certificate management processes for certificate holders. It assesses the safety of Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 145 certificate holders' operating systems using system safety principles, Safety Attributes, and risk management (RM). SAS is an automation tool that aids the Federal Aviation Administration (FAA) in determining that each certificate holder upholds its safety duties and responsibilities and that air carriers provide service with the highest possible degree of safety in the public interest. In the Action Module, the PI/CPM makes a decision and executes a course of action based on the determinations made during Analysis and Assessment.

NOTE: The Analysis, Assessment, and Action (AAA) process described in this chapter aligns with the Compliance Action requirements of Volume 14, Chapter 1, Sections 1 and 2. The action choices listed in this chapter are all acceptable methods of addressing noncompliance at its source. Volume 10 and Volume 14 guidance must be followed to document Compliance Action in SAS.

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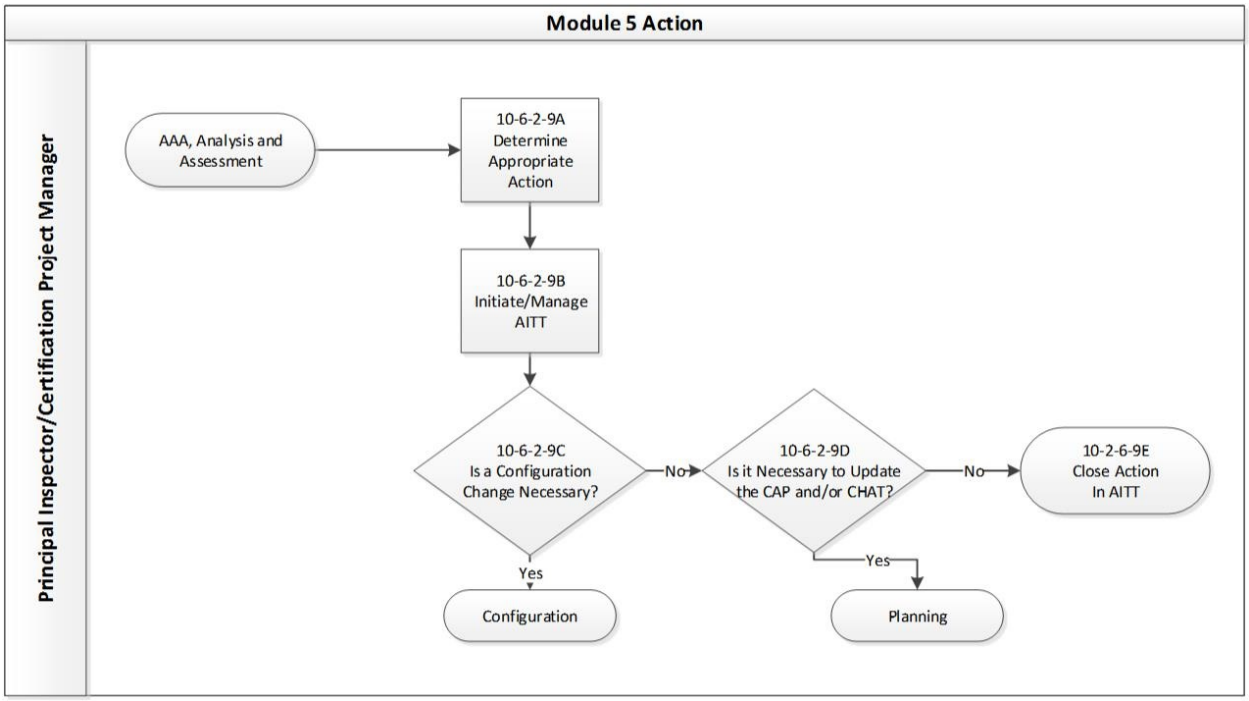
10-6-2-7 ACTION.

Figure 10-6-2A. Module 5 Action Process Flowchart



10-6-2-9 PROCEDURES. Action is the last part of the AAA process before the PI/CPM returns to the Configuration and Planning Modules in the SAS closed-loop process. The PI/CPM may request the participation of other technical disciplines to help determine action choices.

A. Determine Appropriate Action (see flowchart process step 10-6-2-9A). If the assessment determination requires action, then the PI/CPM must select one or more of the following action choices in Table 10-6-2A, Action Choices, and provide justification for their choice. For actions related to Volume 14, Chapter 1, Section 2, see Table 10-6-2A on how to document those items in the AITT. The assessment determination justification and the action choices must align. The table below illustrates some examples of possible assessment determinations and action selections. The PI/CPM action justification comment must support the action. Refer to the Automation User Guide (AUG) for information on how to add, edit or remove action items.

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If the Assessment Determination Justification Indicates:	Then (the Action Selection):
The risk has been mitigated and addressed at the point of discovery,	No followup action is required.
Further followup is required,	Choose one or more of the available action(s), such as: Add Custom DCT (C DCT), Add Element Design Assessment (EDA), or Notify Certificate Holder.
The underlying issue(s) warrants further correction,	Choose one or more of the available action(s) to mitigate the risk of reoccurrence, such as: Notify Certificate Holder, Convene a System Analysis Team (SAT), Initiate Risk Management Process (RMP), Amend Operations Specification (OpSpecs), Regulatory Compliance Action, or Other.
The certificate holder has displayed a behavior that is unwilling or unable, a pattern of poor performance, and/or failed to implement the agreed upon corrective action(s),	Enforcement is required; initiate enforcement per Order 2150.3.

B. Initiate/Manage AITT (see flowchart process step 10-6-2-9B). PIs/CPMs must use the AITT to ensure that certificate holders meet schedules for completing corrective actions that result from Design Assessments (DA), Performance Assessments (PA), other oversight functions, Compliance Action, or the identification of any new hazards. The AITT documents immediate and long-term corrective actions required of certificate holders, including specific followup actions that may be required by guidance elsewhere in this order. PIs/CPMs may use the AITT as a "to-do list" to track certificate holder/applicant issues. For example, a C DCT can be created as an action item. The DCT identification number found on the CAP can be entered in the AITT, connecting the two. The item can be closed in the AITT because the C DCT is on the CAP. However, it cannot be used to replace documentation requirements specified in other guidance. The PI/CPM could also select the RMP as a tool to justify either taking action or no action. A title and description for the action can be entered in the "Explanation" field of the AITT. There are several ways an item can be displayed on the AITT; it can be directly added to the AITT by the PI/CPM or it can go through the AAA, CHAT, or a configuration change and populate the AITT. For Compliance Action, see Volume 14, Chapter 1, Section 2.

1) Regulatory Non-Systemic. The PI/CPM must analyze regulatory noncompliance as soon as they are aware of it. The PI/CPM should assess and close out regulatory non-systemic items as soon as the action item is resolved by providing justification and documentation in the AITT. It may be sufficient to close out this item with the information the aviation safety inspector (ASI) provides, such as "Corrected on the Spot." However, the PI/CPM at this time may take additional action if the item needs to be tracked and resolved in more detail. The certificate holder should be informed of any regulatory findings. They should demonstrate

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their willingness to comply by acknowledging the regulatory items. Letters and documentation may be uploaded to the AITT. Justification must be provided by the PI/CPM to close out the associated item.

2) Regulatory Systemic. The PI/CPM must analyze the data collected as soon as they are aware of it and assesses that a regulatory systemic issue was observed. They will choose the appropriate action from the "Assessment Determination/Action" tab and populate the AITT. This item will remain open in the AITT and "pending" in the AAA until the root cause is identified and the action item is resolved. The certificate holder should be informed of any regulatory findings. The certificate holder should demonstrate their willingness to work together to resolve the regulatory issues. An open line of communication is essential: letters, emails, records of phone conversations, timelines, certificate holder corrective action plans, and documentation may be uploaded to the AITT. Justification must be provided by PI/CPM to close out the item.

3) Nonregulatory Safety Concerns. Issues that are nonregulatory but pose a safety concern or recommendation will be recorded in the automation by the ASI for the related element. The PI/CPM must make an assessment determination on the safety concerns and provide justification. The PI/CPM may add an action and/or initiate Compliance Action if a hazard is present or additional followup is necessary. This item will be tracked on the AITT. The certificate holder should be informed of any nonregulatory findings. The PI/CPM must provide justification in the AITT to close the item.

4) Enforcement. The PI/CPM will select "Initiate 2150.3" under "Add Action(s)" from the "Assessment Determination/Action" tab. The "Action Justification" comment area will be used to document why enforcement was initiated, such as the certificate holder displays a behavior that is unwilling, uncooperative, or unable to proceed with Compliance Action. "Initiate 2150.3" can also be selected from the "AITT Record List" "Add-Sub Action" tab at any time the certificate holder is unwilling to comply. Compliance Action may be discontinued when an enforcement has been initiated. When appropriate, investigating offices may use both Compliance Action and enforcement action (see Volume 14, Chapter 1, Section 2 for additional information). The PI/CPM must track the enforcement item on the AITT and provide justification in the "Explanation" field.

5) Manage Compliance Action. PIs/CPMs must use the AITT as a centralized means to initiate, track, and resolve Compliance Action and safety items. The PI/CPM must document the results of the Root Cause Analysis (RCA), the identified hazards or ineffective risk controls, and how the problem was corrected. Only items that move through the AAA will display in the "Action Implementation" tab. The AITT covers all Compliance Action for tracking and resolution. Items on the AITT may need further analysis. The "Assessment Details" page will display the "Previous Assessment Results" for an item (e.g., "4.5 Maintenance Facilities/Providers may have a previous assessment result of 3, yellow"). The PI/CPM will need to determine if it is necessary to update the CAP and/or CHAT based on analysis of the AITT. The PI/CPM should close all open action items in AITT as soon as the item is resolved. The AITT current and historical data should be included in the annual/quarterly planning review to look for indicators that may identify areas of potential risk.

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6) Documentation and Due Dates. For actions related to Volume 14, Chapter 1, Section 2, see Table 10-6-2A, on how to document those items in the AITT. The default due date for an action item is the last day of the next quarter. Due dates may be adjusted with a justification. The automation will flag the action as it approaches or passes the due date. See the table below for flagged automation statuses and due dates.

Red	Overdue	Past due
Yellow	Advisory	Due within 15 calendar-days (default)
Green	On Time	Due in more than advisory # calendar-days

NOTE: Actions generated from the AAA autopopulate on the "Action Implementation" tab, which serves as the AITT. Followup actions are automatically tied to the original (closed) assessment.

C. Is a Configuration Change Necessary? (see flowchart process step 10-6-2-9C). As a result of the PI/CPM's action selected, a configuration change may be necessary when the PI/CPM determines the certificate holder's or applicant's performance or design cannot be affirmed due to systemic or regulatory issues. If a configuration change is necessary, the PI/CPM documents the change in the AITT. The certificate holder or applicant may be required to modify its design, or the PI/CPM may modify the authorizations. (See Volume 10, Chapter 2, Section 1 on how to initiate a configuration change.) If the PI/CPM determines a configuration change is not necessary, then see Step 10-6-2-9D, Is it Necessary to Update the CAP and/or CHAT?

D. Is it Necessary to Update the CAP and/or CHAT? (see flowchart process step 10-6-2-9D). If the PI/CPM selects "adjusting the resource order of SPA" or "adding an EPA, EDA or C DCT," then it is necessary to update the CAP or update the CHAT risk indicators that have been mitigated or identified. Updating the CAP and/or CHAT closes the oversight loop. See Volume 10, Chapter 3, Section 1, on how to adjust and update the CAP and/or CHAT.

E. Close Action in AITT (see flowchart process step 10-6-2-9E). The PI/CPM should close all open action items in AITT as soon as the action is complete. If an action item has not been completed satisfactorily, then it can be extended until the next quarter. When the PI/CPM closes the action in the AITT, he or she must provide justification.

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Table 10-6-2A. Action Choices

Action Choices	Instructions for Use
Adjust Priority/Resource Order of System or Subsystem Performance Assessment (SPA)	Select this action to adjust the due dates which will change the resource order of an assessment on the Comprehensive Assessment Plan (CAP). See Volume 10, Chapter 3 for more information.
Add Element Performance Assessment (EPA) or Element Design Assessment (EDA)	Select this action to add a Performance Assessment (PA) or Design Assessment (DA). Those assessments will autopopulate on the CAP with the associated SPA.
Add Custom Data Collection Tool (C DCT)	Select this action to create a C DCT. The C DCT will autopopulate on the CAP.
Notification to Certificate Holder	Select this action to notify the certificate holder or applicant of issues or findings. When the PI/CPM provides the certificate holder or applicant with information collected and stored in the automation, they must summarize that information. Do not provide screenshots from the automation or raw data. See Volume 10, Chapter 1 for more information. The PI/CPM will provide a notification to the certificate holder or applicant in the form of a letter outlining the results of the assessment. The letter will include the areas inspected and a list of any discrepancies and/or observations. See Volume 1, Chapter 3 and Volume 14, Chapter 1, Appendix 14-4 for more information.
Initiate Enforcement per Federal Aviation Administration (FAA) Order 2150.3, FAA Compliance and Enforcement Program	Select this action if a certificate holder or applicant exhibits intentional, reckless, or criminal behavior, or a pattern of negative behavior to conduct operations contrary to applicable parts of 14 CFR. Follow the procedures outlined in Volume 14 and Order 2150.3.
Amend or Remove an Operations Specification (OpSpec)	Select this action if the certificate holder or applicant does not meet the requirements for approval or acceptance. The certificate holder or applicant may be required to modify its system, or the FAA may modify its authorizations.
Convene a System Analysis Team (SAT)	Select this action to develop and execute collaborative action plans to ensure certificate holders manage its risks. See Volume 10, Chapter 7, Section 3 for more information.
Identify a New Hazard (Request National Safety Analysis (NSA) Support)	Select this action when the associated risk is not adequately controlled by current directives, or risk controls do not exist to effectively mitigate risk (e.g., in the case of new technology). The hazard may be a systemic or a potentially systemic safety issue that may apply to multiple certificate holders. See Volume 10, Chapter 7, Section 2 for more information.

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Table 10-6-2A. Action Choices (Continued)

Action Choices	Instructions for Use
Initiate a Risk Management Process (RMP)	Select this action to ensure that the certificate holder is effectively managing the risk in their operation. See Volume 10, Chapter 7, Section 1 and Volume 6, Chapter 2, Section 18 for more information. For information on how to create and track hazards in the AITT, refer to the Automation User Guide (AUG).
Regulatory Compliance Action	Select this action when the certificate holder did not meet regulatory requirements and it was determined that enforcement action is not required. See Volume 14, Chapter 1, Section 2.
Other	Select this action for any other item not covered in the “add action” list.

10-6-2-11 through 10-6-2-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 7 RISK MANAGEMENT PROCESS AND SYSTEM ANALYSIS TEAM

Section 1 Safety Assurance System: Risk Management Process

10-7-1-1 GENERAL. Principal inspectors (PI) use the risk management process (RMP) to document, track, and evaluate the status of existing hazards and their associated risks.
This section describes the process to initiate an RMP. If a new hazard is identified, then PIs need to see Volume 10, Chapter 7, Section 2, which describes the process to initiate a new hazard and the role of the National Safety Analysis (NSA).

A. Purpose. This section describes the RMP-specific roles and the procedures to manage hazards and the associated risks.

B. Scope. In the RMP, the PI will:

- Identify a hazard;
- Determine if the hazard requires NSA support;
- Select action details;
- Select hazard details;
- Select RMP classification;
- Determine RMP classification;
- Select RMP mitigation approach;
- Determine if the RMP worked; and
- Close the RMP.

10-7-1-3 RESERVED.

10-7-1-5 BACKGROUND.

A. Overview. Hazard identification is a key component of the Safety Assurance System (SAS). PIs can identify a safety problem within a certificate holder's systems throughout the SAS process. For example, PIs have the option of selecting an RMP action during the Certificate Holder Assessment Tool (CHAT); Data Collection; or Analysis, Assessment, and Action (AAA) (Action) process. The RMP is an interactive management activity dedicated to assuring that hazards are identified, documented, and eliminated or mitigated.

B. RMP Participants. The PI is the primary participant of the RMP and will determine when to use this process. When appropriate, the PI may include aviation safety inspectors (ASI), Operation Research Analysts (ORA), and Data Quality Reviewers (DQR) to assist with historical and statistical information.

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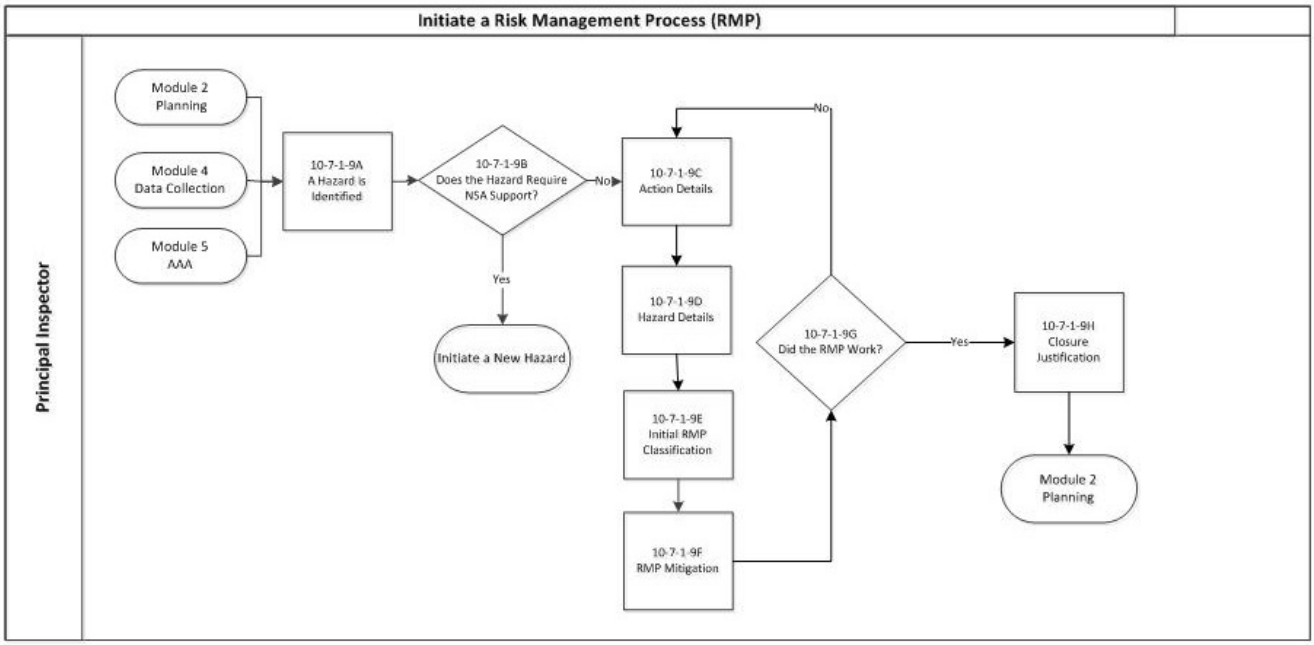
10-7-1-7 RMP FLOW.

Figure 10-7-1A. Initiate a Risk Management Process Flowchart



10-7-1-9 PROCEDURES.

A. A Hazard is Identified (see flowchart process step 10-7-1-9A). A hazard is defined as a condition that could foreseeably cause or contribute to an aircraft accident as defined in Title 49 of the Code of Federal Regulations (49 CFR) part 830, § 830.2. The PI may identify hazards in the CHAT, the Action part of the AAA, or Data Collection. There are two paths a PI can take when identifying a hazard: “Initiate an RMP” or “Identify New Hazard (Request NSA Support).” An RMP is used when the certificate holder knowingly or unknowingly accepts, or even generates an undesirable level of risk and the PI takes action to ensure that the certificate holder is effectively managing these risks in their operation. The “Identify New Hazard (Request NSA Support)” action is used when there is a new hazard which is defined as one where the associated risk is not adequately controlled by current directives, or risk controls do not exist to effectively mitigate risk (e.g., in the case of new technology). The hazard may be a systemic or potentially systemic safety issue that may apply to multiple certificate holders. See Volume 10, Chapter 7, Section 1 and Volume 6, Chapter 2, Section 18 for more information. The RMP contains five sections: Action Details, Hazard Details, Initial RMP Classification, RMP Mitigation, and Closure Justification.

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B. Does the Hazard Require NSA Support? (see flowchart process step 10-7-1-9B).

IF:	THEN:
The PI identifies hazards involving the certificate holder knowingly or unknowingly accepting, or generating, an undesirable level of risk,	The PI initiates an RMP.
The PI identifies safety issues where the associated risk is not adequately controlled by current directives, or risk controls do not exist to effectively mitigate risk (e.g., in the case of new technology) (the hazard may be a systemic or potentially systemic safety issue that may apply to multiple certificate holders),	The PI uses the NSA functional analysis to the initiate "Identify New Hazard" action in the automation. See Volume 10, Chapter 7, Section 2 for the new hazard process.

C. Action Details (see flowchart process step 10-7-1-9C). This section is used to describe why this action is being taken. The default due date is the last day of the next quarter. If the due date is changed from the default due date, then add a reason in the "Due Date Change" comment box. Attach any supporting documentation as required.

NOTE: Although not required, the "Potential Consequence" field is important. It specifies the possible negative outcome(s) if nothing is done to mitigate the hazard. Select the potential negative consequence(s) from the list. It is helpful to enter additional descriptive information about the potential consequence in the text box.

D. Hazard Details (see flowchart process step 10-7-1-9D). This section is used to describe the hazard. This assists in risk analysis and provides targets for action plans. Enter the hazard title and description in the appropriate boxes. Complete the other fields, such as "Location" and "Related Make, Model, and Series (M/M/S)." The point of contact (POC) field includes a drop-down list with the office personnel. The PI may request the Frontline Manager (FLM) to assign a POC to assist with the RMP. The POC assumes the PI's authority for accomplishing the RMP and can be assigned action items associated with the RMP. However, only the PI can open and close the RMP.

E. Initial RMP Classification (see flowchart process step 10-7-1-9E). Use this section to identify the risk factors. Select the risk factor type from the following options: Procedures, Control, Process Measurement, Interfaces, Responsibility, Authority, Safety Ownership, Situation, Other, and Unknown. Enter a description of the risk factor in the description text box. Choose the appropriate severity and likelihood from the drop-down menus. The automation calculates the risk assessment based on values in the risk matrix table (see Table 10-7-1B, Risk Matrix Table).

F. RMP Mitigation (see flowchart process step 10-7-1-9F). Select the risk mitigation approach from the drop-down menu. The options are Mitigate, Monitor, and Transfer. Enter a justification in the text box. See Table 10-7-1A, Risk Management Process Mitigation Options, for a description of the mitigation options.

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Table 10-7-1A. Risk Management Process Mitigation Options

Mitigation Options	Description
Mitigate	An action plan that reduces the severity of risk consequences. For example, the action is within the scope of the Flight Standards office's authority. Identify what the certificate holder must control in order to reduce the level of risk. These factors then become specific targets for risk control to eliminate or reduce the negative effects. Determine known risk factors associated with the severity of the consequences and the likelihood of occurrence. Risk factors are typically situational factors, for example: • Operating conditions that promote corrosion; • Aging aircraft or high-cycle use of aircraft; or • Deficiencies in design or performance related to Safety Attributes (e.g., missing attributes or failure to adhere to procedures).
Monitor	An action plan to keep under systematic review. Observe and check the certificate holder/applicant's progress or quality over a period of time.
Transfer	An action plan that transfers risk from one organization to another. For example, if the action is outside of the Flight Standards office's authority, then determine the appropriate Federal Aviation Administration (FAA) organization that has the authority, responsibility, and accountability to take corrective action for the identified hazard. Use this approach to address risks that may require actions such as rule changes, new or revised Airworthiness Directives (AD), policy changes, and safety recommendations. Once the action plan has been transferred, the risk management process (RMP) can be closed. You may follow up on the status of transferred items.

G. Did the RMP Work? (see flowchart process step 10-7-1-9G). If the PI determines the action items are complete, or data indicates that the action plan has eliminated the hazard or reduced the associated risk to acceptable levels, then the PI validates the effectiveness of the action plan. The PI validates the effectiveness of the approach by reviewing the hazard and verifying the certificate holder has eliminated the hazard or mitigated risk to an acceptable level. After evaluating the results of the action plan, the PI decides whether to close the RMP or add action items. If the PI decides to add additional action items and not close the RMP, then see Step 10-7-1-9C, Action Details. If the PI determines the action plan works, then see

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Step 10-7-1-9H, Closure Justification. Use the following information as a guide to evaluate the effectiveness of the action plan:

1) Evaluate the status of the hazard by verifying that the certificate holder addressed the risk factors that contributed to or caused the hazard to occur.

2) Verify the certificate holder reduced the level of risk posed by the hazard.

3) Determine if the action plan addressed each risk factor. Describe changes in the risk factors based on the action taken.

H. Closure Justification (see flowchart process step 10-7-1-9H). After the PI has determined whether the certificate holder has addressed the risk factors and reviewed the hazard and its consequence descriptions, the PI revises the severity and likelihood values. The PI uses the risk matrix to determine if the overall level of risk is affected. Choose the new severity and likelihood values from the drop-down menu. If the overall risk is low (within the green area), the PI may accept it without further action. No additional assessments are required beyond the normal oversight planning. If the level of risk is acceptable, the PI closes the RMP. If the level of risk is not acceptable, then the PI revises the hazard description and associated details to determine what additional actions are necessary.

Table 10-7-1B. Risk Matrix Table

Risk Matrix			
Likelihood	**Severity**		
	High	**Medium**	**Low**
Frequent	**12**	**10**	**8**
Probable	**11**	**7**	**5**
Occasional	**9**	**4**	**2**
Remote	**6**	**3**	**1**
Overall Risk Assessment Legend: 12-10 (Red) High Overall Risk 9-4 (Yellow) Medium Overall Risk 3-1 (Green) Low Overall Risk			

10-7-1-11 through 10-7-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 7 RISK MANAGEMENT PROCESS AND SYSTEM ANALYSIS TEAM

Section 2 Safety Assurance System: Initiate a New Hazard

10-7-2-1 GENERAL.

A. Purpose. This section describes the process to initiate and manage a new hazard and the associated risk.

B. Scope. In the Initiate a New Hazard process, the principal inspector (PI) will:

- Identify a hazard;
- Determine if the hazard requires National Safety Analysis (NSA) support;
- Select action details;
- Select hazard details;
- Review the NSA initial hazard classification;
- Select the hazard mitigation;
- Determine if the hazard mitigation works; and
- Close the new hazard.

10-7-2-3 RESERVED.

10-7-2-5 BACKGROUND.

A. Overview. Hazard identification is a key component of the Safety Assurance System (SAS). PIs can identify safety issues throughout the SAS process. When a new hazard is identified, PIs may add the action “Identify New Hazard (Request NSA Support)” during the Certificate Holder Assessment Tool (CHAT); Data Collection; or the Analysis, Assessment, and Action (AAA) process. These processes enable a PI to request national-level support to address a safety issue.

B. Participants. The PI and the Analysis and Information Program Office (AIPO) are the primary participants of the new hazard process. When appropriate, the PI may include aviation safety inspectors (ASI), Operations Research Analysts (ORA), and Data Quality Reviewers (DQR) to assist with historical and statistical information.

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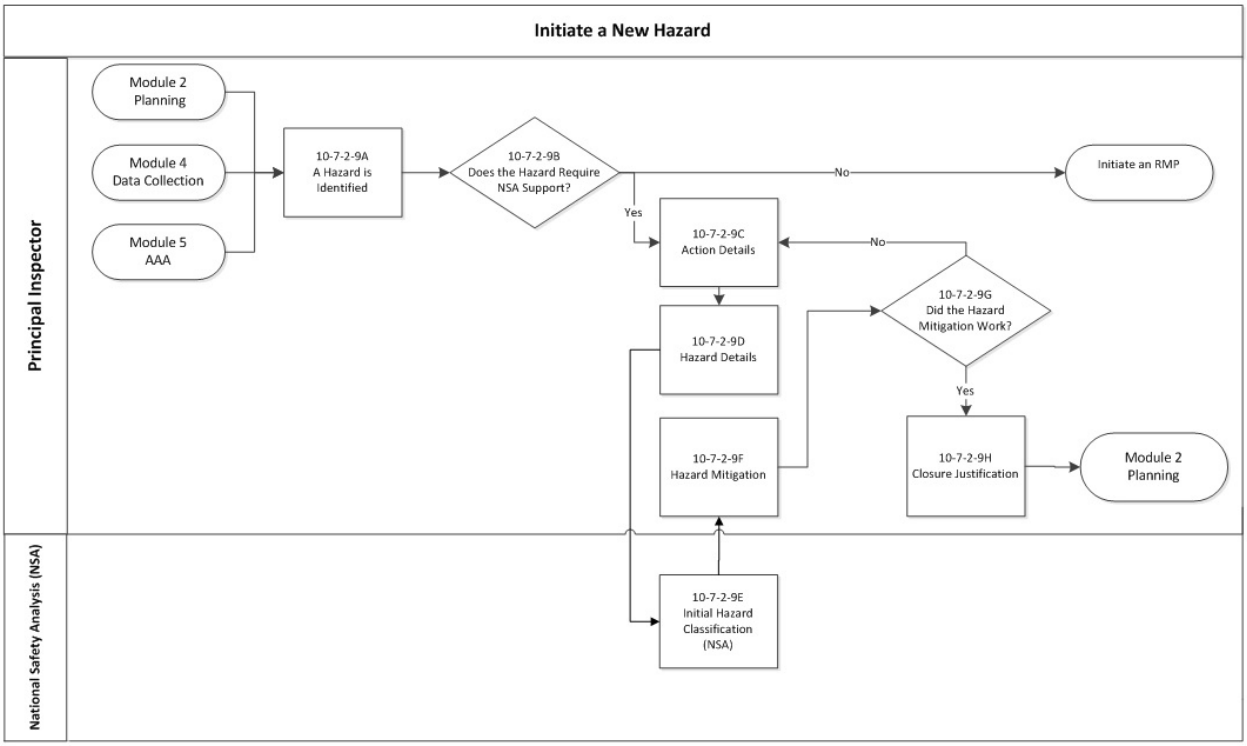
10-7-2-7 INITIATE A NEW HAZARD.

Figure 10-7-2A. Initiate a New Hazard Flowchart



10-7-2-9 PROCEDURES.

A. A Hazard is Identified (see flowchart process step 10-7-2-9A). A hazard is defined as a condition that could foreseeably cause or contribute to an aircraft accident as defined in Title 49 of the Code of Federal Regulations (49 CFR) part 830, § 830.2. A PI may identify hazards with the CHAT, the Action part of the AAA, or Data Collection. There are two paths the PI can take when identifying a hazard: “Initiate a risk management process (RMP)” or “Identify New Hazard (Request NSA Support).” This option is used when there is a new hazard which is defined as one where the associated risk is not adequately controlled by current directives, or controls do not exist to effectively mitigate risk (e.g., in the case of new technology). The hazard may be a systemic or potentially systemic safety issue that may apply to multiple certificate holders. If the PI selects “Add Action” and “Identify New Hazard (Request NSA Support),” then that hazard will be tracked on the Action Item Tracking Tool (AITT). An RMP is used when the certificate holder knowingly or unknowingly accepts, or even generates, an undesirable level of risk, and the PI takes action to ensure that the certificate holder is effectively managing these risks in their operation.

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B. Does the Hazard Require NSA Support? (see flowchart process step 10-7-2-9B).

IF:	THEN:
The PI identifies hazards involving the certificate holder knowingly or unknowingly accepting, or generating, an undesirable level of risk,	The PI initiates an RMP. See Volume 10, Chapter 7, Section 1 for the RMP.
The PI identifies safety issues where the associated risk is not adequately controlled by current directives, or risk controls do not exist to effectively mitigate risk (e.g., in the case of new technology) (the hazard may be a systemic or a potentially systemic safety issue that may apply to multiple certificate holders),	The PI uses the NSA functional analysis to initiate the "Identify New Hazard" action in the automation.

C. Action Details (see flowchart process step 10-7-2-9C). This section is used to describe why this action is being taken. The default due date is the last day of the next quarter. If the due date is changed from the default due date, then add a reason in the "Due Date Change" comment box. The NSA response default due date is 15 calendar-days. Attach any supporting documentation as required.

D. Hazard Details (see flowchart process step 10-7-2-9D). This section is used to describe the hazard. This assists in risk analysis and provides targets for action plans. Enter the hazard title and description in the appropriate boxes. Complete the other fields, such as "Location" and "Related Make, Model, and Series (M/M/S)." The point of contact (POC) field includes a drop-down list with the office personnel. The PI may request the Frontline Manager (FLM) to assign a POC to assist with the new hazard process. The POC assumes the PI's authority for accomplishing the new hazard and can be assigned action items. However, only the PI can open and close the new hazard process.

NOTE: Although not required, the "Potential Consequence" field is important. It specifies the possible negative outcome(s) if nothing is done to mitigate the hazard. Select the potential negative consequence(s) from the list. It is helpful to enter additional descriptive information about the potential consequences in the text box. This section is used to describe why this action is being taken and should include any supporting documents.

NOTE: "Submit to NSA" must be selected for the AIPO to process the "Identify New Hazard" action in the automation.

E. Initial Hazard Classification (NSA) (see flowchart process step 10-7-2-9E). The AIPO evaluates the new hazard and responds with an overall risk value. The NSA may also determine that national action may need to be taken, such as developing a new Data Collection Tool (DCT), rulemaking, Airworthiness Directives (AD), etc. When the AIPO completes analysis of the new hazard, the record is identified as "NSA Responded" and returned to the PI.

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F. Hazard Mitigation (see flowchart process step 10-7-2-9F). Select the risk mitigation approach from the drop-down menu. The options are Mitigate, Monitor, and Transfer. Enter a justification in the text box. See Table 10-7-2A, Hazard Mitigation Options, for a description of the hazard mitigation options.

Table 10-7-2A. Hazard Mitigation Options

Mitigation Options	Description
Mitigate	An action plan that reduces the severity of risk consequences. For example, the action is within the scope of the Flight Standards office's authority. Identify what the certificate holder must control in order to reduce the level of risk. These factors then become specific targets for risk control to eliminate or reduce the negative effects. Determine known risk factors associated with the severity of the consequences and the likelihood of occurrence. Risk factors are typically situational factors, for example: • Operating conditions that promote corrosion; • Aging aircraft or high-cycle use of aircraft; or • Deficiencies in design or performance related to Safety Attributes (e.g., missing attributes or failure to adhere to procedures).
Monitor	An action plan to keep under systematic review. Observe and check the certificate holder/applicant's progress or quality over a period of time.
Transfer	An action plan that transfers risk from one party to another. For example, if the action is outside of the Flight Standards office's authority, then determine the appropriate Federal Aviation Administration (FAA) organization that has the authority, responsibility, and accountability to take corrective action for the identified hazard. Use this approach to address risks that may require actions such as rule changes, new or revised Airworthiness Directives (AD), policy changes, and safety recommendations. Once the action plan has been transferred, the new hazard can be closed. You may follow up on the status of transferred items.

G. Did the Hazard Mitigation Work? (see flowchart process step 10-7-2-9G). If the PI determines the action items are complete, or data indicates that the action plan has eliminated the hazard or reduced the associated risk to acceptable levels, then the PI validates the effectiveness of the action plan. The PI evaluates the effectiveness of the approach by reviewing the hazard and verifying the certificate holder has eliminated the hazard or mitigated risk to an acceptable level. After evaluating the results of the action plan, the PI decides whether to close the new hazard or add action items. If the PI decides to add additional action items and not close the new hazard, then see Step 10-7-2-9C, Action Details. If the PI determines the action plan

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worked, then see Step 10-7-2-9H, Closure Justification. Use the following information as a guide to evaluate the effectiveness of the action plan:

1) Evaluate the status of the hazard by verifying that the certificate holder addressed the risk factors that contributed to or caused the hazard to occur.

2) Verify the certificate holder reduced the level of risk posed by the hazard.

3) Determine if the action plan addressed each risk factor. Describe changes in the risk factors based on the action taken and analyze the related data to determine if the controls were effective.

H. Closure Justification (see flowchart process step 10-7-2-9H). Choose the new severity and likelihood values from the drop-down menu. If the level of risk is acceptable, then close the new hazard with justification. If the level of risk is not acceptable, then return to Step 10-7-2-9C, Action Details.

Table 10-7-2B. Risk Matrix Table

Risk Matrix			
Likelihood	**Severity**		
	High	**Medium**	**Low**
Frequent	**12**	**10**	**8**
Probable	**11**	**7**	**5**
Occasional	**9**	**4**	**2**
Remote	**6**	**3**	**1**
Overall Risk Assessment Legend: 12-10 (Red) High Overall Risk 9-4 (Yellow) Medium Overall Risk 3-1 (Green) Low Overall Risk			

10-7-2-11 through 10-7-2-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 7 RISK MANAGEMENT PROCESS AND SYSTEM ANALYSIS TEAM

Section 3 Safety Assurance System: System Analysis Team

10-7-3-1 GENERAL.

A. Purpose. This section describes procedures and specific roles for the System Analysis Team (SAT) to determine the root cause of systemic problems.

B. Scope. In the SAT, the principal inspector (PI) will:

- Determine if there is a systemic hazard;
- Determine if a SAT is required;
- Convene the SAT;
- Determine if a risk management process (RMP) is required; and
- Initiate an RMP.

10-7-3-3 RESERVED.

10-7-3-5 BACKGROUND. The SAT is used to develop action plans to ensure certificate holders manage their risks. Work together with our personnel (the Federal Aviation Administration (FAA)), the certificate holder, and other non-FAA entities to determine root causes and recommend solutions. The SAT process encourages SAT participants to provide feedback on any actions taken as part of the information sharing process.

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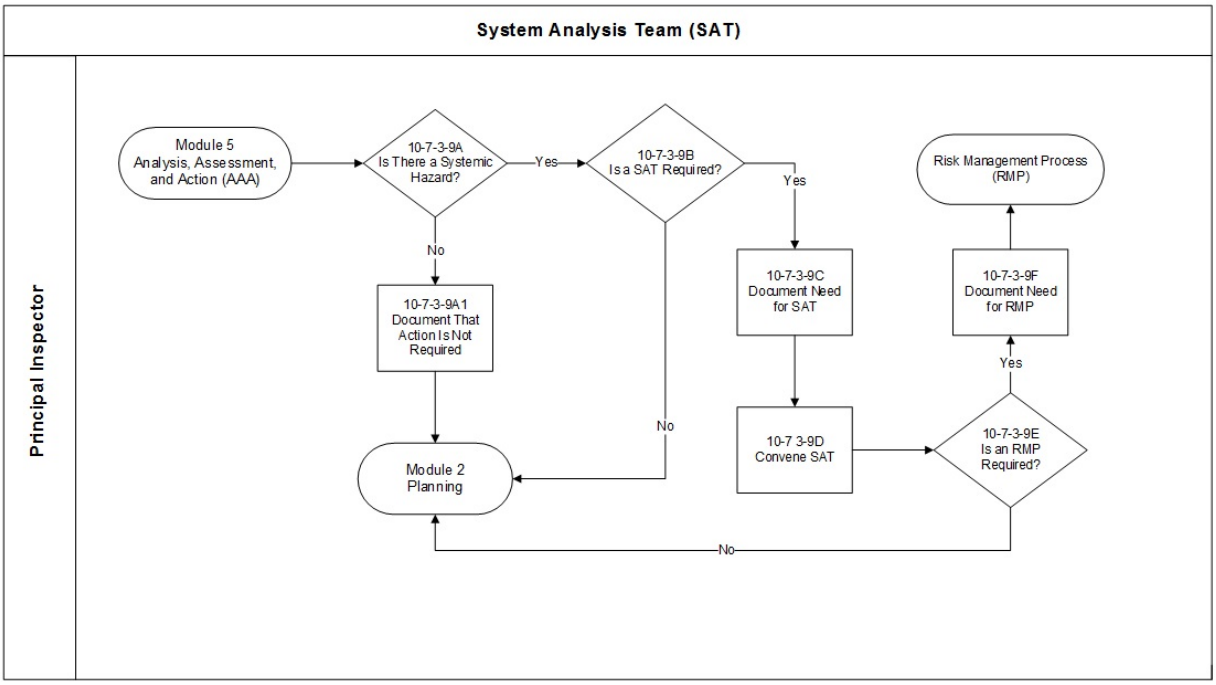
10-7-3-7 SAT PROCESS.

Figure 10-7-3A. System Analysis Team (SAT) Process Flowchart



10-7-3-9 PROCEDURES.

A. Is There a Systemic Hazard? (see flowchart process step 10-7-3-9A). Hazards are conditions, events, or circumstances that could lead or contribute to an unplanned or undesired outcome. (Some hazards are isolated incidents that typically attribute to performance and do not require system-level changes, but they may indicate systemic hazards.) Systemic hazards are those that indicate defects in the design of the certificate holder's processes (e.g., missing procedures, poor controls, or lack of attention to interfaces), patterns of repeated noncompliance with procedures, or significant changes in the operating environment. Controlling or eliminating systemic hazards requires modifications to the system design. If no systemic hazards are identified, see Step 10-7-3-9A1, Document That Action Is Not Required, and document that action is not required in the Analysis, Assessment, and Action (AAA). If there is a systemic hazard, see Step 10-7-3-9B, Is a SAT Required?

B. Is a SAT Required? (see flowchart process step 10-7-3-9B). If a SAT is required, see Step 10-7-3-9C, Document Need for SAT. When you become aware of a systemic hazard, determine if a SAT is beneficial. Form a SAT at your discretion when further analysis is required to determine the root cause of a systemic problem. The SAT may perform further analysis and determine the root cause with participants from the following:

- The appropriate Flight Standards office;
- Certification Project Team (CPT);
- Other FAA personnel;

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- Airline and/or manufacturers' representatives; and
- Industry personnel.

NOTE: A common approach to a SAT is to work jointly with the certificate holder or industry to identify system deficiencies.

C. Document Need for SAT (see flowchart process step 10-7-3-9C). Use the SAT process to develop and execute collaborative action plans to ensure certificate holders manage its risks. Work together with our personnel, the certificate holder, and other non-FAA entities to determine root causes and recommend solutions. The SAT process provides feedback on any actions taken to applicable parties as part of the information sharing process.

NOTE: The SAT process does not change Flight Standards Service enforcement policies. Conduct SATs in a manner that does not compromise our enforcement responsibilities (see Volume 14, Compliance and Enforcement, and refer to FAA Order 2150.3, FAA Compliance and Enforcement Program).

D. Convene SAT (see flowchart process step 10-7-3-9D).

IF:	THEN:
You convene a SAT,	Open an RMP to document the need to convene a SAT and to determine and document the next actions that are taken. Then request input from the certificate holder for SAT composition. Depending on the nature of the system problem, the SAT may include the following: • The appropriate Flight Standards office members, • Other FAA personnel, • Airline representatives, • Manufacturers' representatives, and • Other industry personnel. The certificate holder coordinates the participation with non-FAA participants, such as manufacturers' representatives or other industry personnel.
You require participation,	Contact personnel from the certificate holder and the FAA to request their participation on the SAT. The certificate holder coordinates the participation with non-FAA participants such as manufacturers' representatives or other industry personnel. (See Figure 10-7-3B, Sample Letter Requesting Participation on a System Analysis Team.)
Your initial request for participation is not accepted,	Send a written request for participation to the appropriate certificate holder management official.

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IF:	THEN:
Your request for participation is declined,	Notify your division manager through your Office Manager (OM). The division manager and the OM may choose to do one of the following: • Contact a higher level of management at the organization that declined; or • Continue the SAT without the initially identified participants.
You need to develop, implement, and validate the results of the SAT,	Coordinate with other appropriate parties of the SAT to: • Determine the approach to use; • Develop RMP action items; • Coordinate performance of the action items; and • Determine if the RMP eliminates the hazard or reduced the risk level sufficiently so that no additional action is necessary. Analyze all data to ensure that the controls are operating as expected and no new unanticipated hazards were introduced.
The RMP is complete,	Provide feedback to applicable parties. As part of the information sharing process, after the RMP is complete, communicate the results to all applicable parties.

E. Is an RMP Required? (see flowchart process step 10-7-3-9E). The RMP is the primary tool that develops, reports, and documents in the SAT process. If you determine a SAT is necessary, open an RMP to document the need for a SAT and to document the outcome or what actions were taken based upon the SAT. As you implement the RMP, the appropriate Flight Standards office members perform periodic process checks to monitor whether the action items are complete and effective. Once the action items are complete, the SAT verifies that the overall action plan either eliminates the hazard or reduces the level of risk so that no additional action is necessary. If no RMP is required, continue your normal planning during the planning cycle. If an additional RMP is required from the determination of the SAT outcome, see Step 10-7-3-9F, Document Need for RMP.

F. Document Need for RMP (see flowchart process step 10-7-3-9F). Determine if an RMP is required to address the hazard. Document the decision and provide an explanation. See Volume 10, Chapter 7, Section 1 for more information on the RMP.

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10-7-3-11 JOB AIDS.

Figure 10-7-3B. Sample Letter Requesting Participation on a System Analysis Team

U.S. Department
of Transportation
Federal Aviation Administration

[Date]

[Address]

Dear [Appropriate Official],

As part of the FAA's Safety Assurance System (SAS) Implementation [action] process, the FAA may respond to an identified risk via several action plans. One is to convene a System Analysis Team (SAT) whose objective is a collaborative approach whereby the certificate holder, other non-FAA entities, and the FAA work together on significant safety matters to determine the root cause(s) and solutions.

The [Flight Standards office] and [certificate holder] have agreed to convene a SAT to develop an action plan (see attachment) that will set milestone dates, assign the responsible company departments and personnel, and forecast completion dates with the focus on [describe the problem that the SAT was formed to address].

This meeting is scheduled for [date, time, and location]. FAA participation will include [names and titles of participants from the FAA].

Thank you for your cooperation and this opportunity to effect tangible improvements to safety.

Sincerely,

[Name and title of PI, certification project manager (CPM), or manager]

10-7-3-13 through 10-7-3-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 8 CERTIFICATE HOLDER EVALUATION PROCESS

Section 1 Safety Assurance System: Certificate Holder Evaluation Process

10-8-1-1 GENERAL.

A. Purpose. The Certificate Holder Evaluation Process (CHEP) provides the Flight Standards Service with standard policies and procedures to evaluate Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 145 certificate holders. If you are the principal inspector (PI); Frontline Manager (FLM); aviation safety inspector (ASI); national, divisional, or Flight Standards office manager, this section applies to you. When information is applicable to someone other than the positions listed, the procedures are specific. Evaluations are an extension of Element Performance Assessments (EPA), Element Design Assessments (EDA), and System/Subsystem Performance Assessments (SPA).

B. Scope. The CHEP is a process used at the national, divisional, and office levels.

10-8-1-3 RESERVED.

10-8-1-5 BACKGROUND.

A. Objectives. The CHEP allows for an indepth look at the certificate holder's system and has three primary goals:

1) Verify the certificate holder complies with applicable regulations;

2) Evaluate whether the certificate holder is operating at the highest possible degree of safety in the public interest in accordance with Title 49 of the United States Code (49 U.S.C.) § 44702; and

3) Identify hazards and mitigate associated risks.

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B. Certificate Holder's Participation.

IF:	THEN:
The evaluation is conducted at the national level by the Safety Analysis and Promotion Division,	Certificate holder personnel will not be participating members of the National CHEP.
The evaluation is not conducted at the national level by the Safety Analysis and Promotion Division,	Certificate holder personnel may be participating members at the discretion of the manager responsible for the CHEP.
The certificate holder participates in the evaluation (joint evaluation),	• The CHEP Team Leader (TL) ensures the certificate holder's key management officials (as defined in 14 CFR part 119, § 119.65 or part 145, § 145.151) receive a briefing on the CHEP and the provisions of Advisory Circular (AC) 00-58, Voluntary Disclosure Reporting Program, before beginning the evaluation. • AC 00-58, as written, applies during the evaluation period. However, in the case of a joint evaluation, the certificate holder may apply AC 00-58 when the discovery of a possible violation is made by either party. • Certificate holder management must understand the requirement to use the appropriate Element Design Data Collection Tool (ED DCT) to assess and document the comprehensive fix of any element deficiencies discovered by the evaluation team that involves an apparent violation of Federal Aviation Administration (FAA) regulations.
The certificate holder does not participate in the evaluation, or the FAA decides not to include them (evaluations not conducted jointly),	The provisions and protections contained in AC 00-58 do not apply to apparent violations of FAA regulations discovered by the evaluation team during the specified evaluation period.

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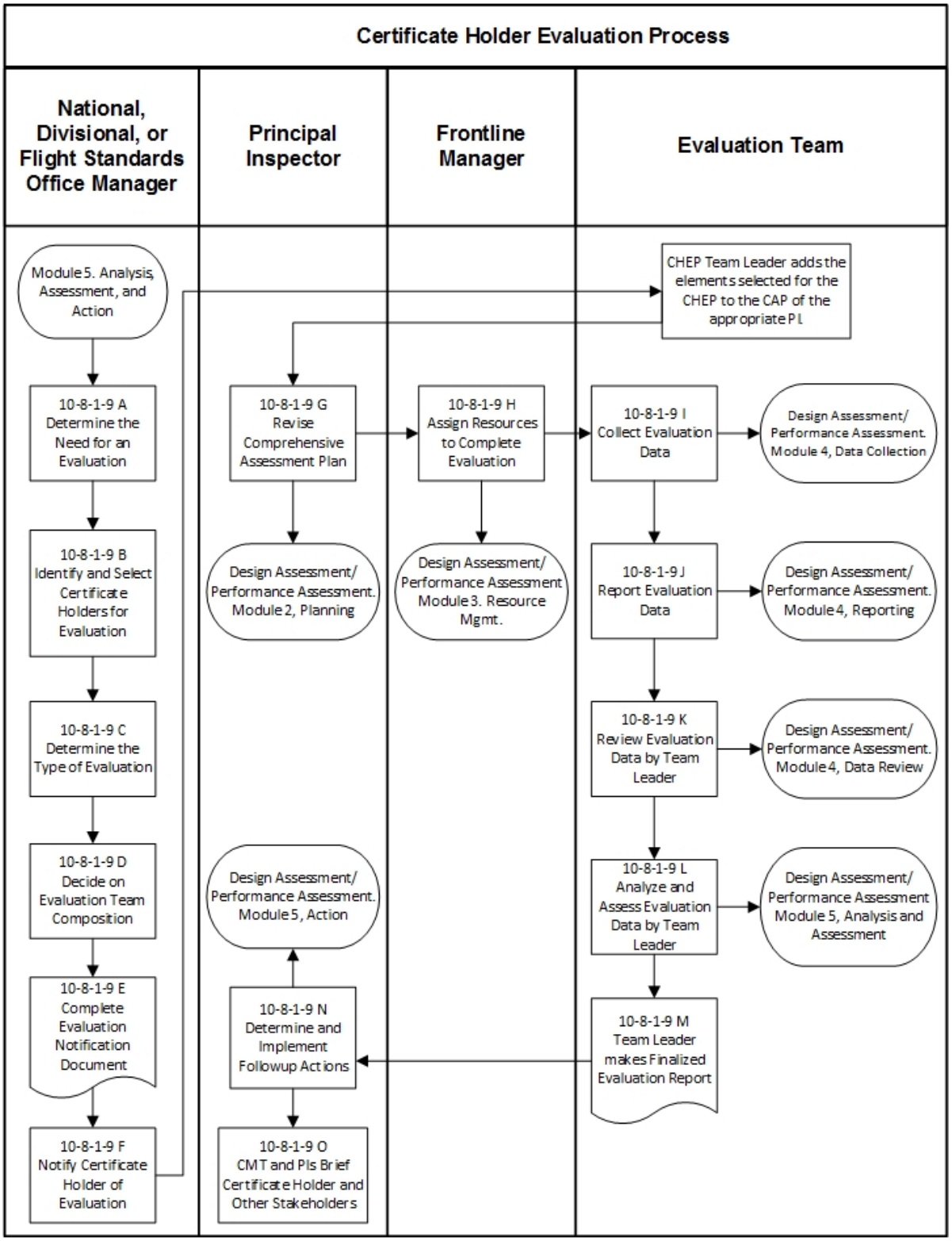
10-8-1-7 CHEP.

Figure 10-8-1A. Certificate Holder Evaluation Process Flowchart



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10-8-1-9 PROCEDURES.

A. Determine the Need for an Evaluation (see flowchart process step 10-8-1-9A). If you are the national, divisional, or Flight Standards office manager, then steps 10-8-1-9A through 10-8-1-9F apply to you. The following conditions may indicate the need to conduct an evaluation:

- Substantial change in certificate holder management;
- Substantial turnover in personnel or reduction in force (RIF);
- Labor dispute;
- Rapid expansion or growth;
- Merger, takeover, or change in ownership;
- Enforcement actions;
- Noncompliant attitude;
- Accidents/incidents/occurrences;
- Department of Defense (DOD) reviews;
- Department of Transportation (DOT)/Office of the Secretary of Transportation (OST) economic authority/insurance requirements;
- Change in fleet type;
- Substantial change in outsourcing;
- Financial distress;
- Substantial customer or employee complaints;
- Hotline complaints; and
- Certificate transfer (refer to § 119.63 regarding the status of operation and/or dormant certificates).

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B. Identify and Select Certificate Holders for Evaluation (see flowchart process step 10-8-1-9B). There are several ways to select a certificate holder for evaluation.

IF:	THEN:
At the national level,	• The Safety Analysis and Promotion Division or the Office of the Executive Director, Flight Standards Service will review a variety of data sources to select a certificate holder for evaluation, including requests from divisions and Flight Standards office managers. • Once a certificate holder is selected, the national manager responsible for the evaluation (or designee) will notify the appropriate division manager and identify a divisional coordinator and a Flight Standards office point of contact (POC) for the evaluation. • The divisional coordinator and Flight Standards office POC are advised of the dates of the in-brief and out-brief and may attend either or both briefings.
At the divisional level,	• The Flight Standards division manager responsible for the certificate holder's oversight may identify and select a certificate holder for evaluation. • The Flight Standards division manager notifies the appropriate Flight Standards office manager of the certificate holder selected for an evaluation. • Flight Standards managers within a division and/or branch may request a divisional-level evaluation.
At the office level,	The Flight Standards office manager responsible for the certificate holder oversight may identify and select the certificate holder for an office-level evaluation.

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C. Determine the Type of Evaluation (see flowchart process step 10-8-1-9C). The CHEP includes two types of evaluations.

IF:	THEN:
Conducting a focused evaluation,	• Select elements/programs using System/Subsystem Performance Data Collection Tools (SP DCT), ED DCTs, Element Performance Data Collection Tools (EP DCT), or other tools as necessary. • There is a specified period for the evaluation. However, should the CHEP team determine that the evaluation should continue based on findings, the evaluation period may be extended as necessary.
Conducting a comprehensive evaluation,	• Select the elements necessary to reissue operations specifications (OpSpecs) using SP DCTs, ED DCTs, EP DCTs, and other tools. • There is no specified period for the evaluation. • Refer to § 119.63 for dormant certificates.

NOTE: An Operations Research Analyst (ORA) can generate reports upon request of the manager.

D. Decide on Evaluation Team Composition (see flowchart process step 10-8-1-9D). The level and type of evaluation, along with the complexity of the certificate holder, will help determine the composition of the evaluation team. Evaluation teams may consist of national, divisional, or Flight Standards office personnel. In some cases, personnel from the certificate holder and other entities may be asked to participate in an evaluation.

TEAM COMPOSITION:	ACTIONS:
CHEP TL NOTE: The manager responsible for the CHEP will designate the TL.	• Responsible for conducting the evaluation in accordance with the policies and procedures. • Guides the evaluation team members on a daily basis during the evaluation period. • Ensures team members receive a briefing on certificate-holder-specific information applicable to the scope of the evaluation. • Decides how the team communicates. • Ensures team members are briefed on the CHEP and the contents of the evaluation notification document. • Organizes team meeting(s) (face-to-face or by other means) as necessary to review the TL instructions in the Comprehensive Assessment Plan (CAP) and any other relevant information.

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TEAM COMPOSITION:	ACTIONS:
CHEP ASIs NOTE: No CHEP ASI may be assigned to a CHEP if that person had responsibility for inspecting the operations and/or ratings of that certificate holder in the 5-year period preceding the date of the evaluation.	• May consist of national, divisional, or Flight Standards office personnel, depending upon the level and scope of the evaluation. • May include certificate holder personnel as participants (if not a national Safety Analysis and Promotion Division CHEP) at the discretion of the manager responsible for the CHEP.
PI	• Not assigned to perform Data Collection as part of the evaluation. (This prohibition includes other ASIs assigned to the certificate holder being evaluated.) • Must be available to provide clarification pertaining to such items as program approvals, authorizations, and exemptions that apply to the assigned certificate holder.
Certificate holder personnel NOTE: Joint evaluations (FAA and certificate holder) include certificate holder personnel as active participants.	• When invited by the FAA to participate during joint evaluations, have an active role in determining and resolving element evaluation issues. • Certificate holder personnel not participating as members of the CHEP team may serve as POCs for the certificate holder on particular elements or areas of expertise.

E. Complete Evaluation Notification Document (see flowchart process step 10-8-1-9E). The Safety Analysis and Promotion Division, division, or Flight Standards office manager, depending on the level of evaluation, must develop and send an evaluation notification document to the Flight Standards office manager. This document will include the following:

- Level and type of evaluation;
- Elements to be evaluated;
- Performance Assessment (PA) or Design Assessment (DA);
- Evaluation period, including projected start and completion dates;
- Name and contact information of designated TL and assistant manager; and
- Certificate holder participation (if any).

F. Notify Certificate Holder of Evaluation (see flowchart process step 10-8-1-9F). The Flight Standards office manager informs the certificate holder of the evaluation and provides a briefing on the process to certificate holder personnel. The certificate holder is briefed by the Safety Analysis and Promotion Division team for a National CHEP. The notification can be verbal; the Flight Standards office manager follows up in writing. The Flight Standards office manager sends the written notification at least 2 weeks before the evaluation begins. The notification contains information such as that found in the evaluation notification document.

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G. Revise Comprehensive Assessment Plan (see flowchart process step 10-8-1-9G). The CHEP TL will add the assessments that have been selected for the evaluation to the Airworthiness and Operations CAP. The CHEP assessments will appear as a triangle at the bottom of the appropriate CAP and do not affect the Certificate Management Team (CMT) CAP. The CMT will adjust their CAP accordingly, taking into account the assessments that are completed by the CHEP Team.

H. Assign Resources to Complete Evaluation (see flowchart process step 10-8-1-9H). Use the following information as a guide for assigning resources to complete evaluation:

1) Prior to the start date of the evaluation period, the Safety Analysis and Promotion Division FLM (for National CHEPs) or the appropriate Safety Assurance System (SAS) Administrator will add the evaluation team members to the CMT in the SAS automation.

2) The CHEP TL distributes tasks by system or subsystem, element, individual questions, or some combination of these to one or more team members, to allow the timely collection of accurate data.

3) The FLM assigns team members to data collection activities to support the evaluation after the team members receive a briefing from the CMT on the certificate holder operations appropriate to the scope of the evaluation.

NOTE: There is no concurrence for assessments supporting a CHEP.

I. Collect Evaluation Data (see flowchart process step 10-8-1-9I). Evaluation team members perform their assigned activities to collect data in accordance with the CAP and TL instructions.

NOTE: When conducting an SP DCT, ASIs can view the related EP DCT using the “Related Element Questions” link. If the ASI determines that additional information is needed to answer or validate an answer for an SP DCT question, the ASI selects the “Add EP DCT” option and that EP DCT is added to the ASI’s Individual Work Plan (IWP). Not all the EP DCT questions have to be answered: only the ones the ASI determines are necessary.

J. Report Evaluation Data (see flowchart process step 10-8-1-9J). Team members enter their responses into the SAS automation in accordance with the data quality guidelines (DQG) after collecting evaluation data. Critical or time-sensitive information must be reported to the CHEP TL and the PI immediately. Any unsafe condition that would result in an accident, incident, or violation discovered during the evaluation should be handled based on the applicable guidance. Objective documents which detail and support inspection findings may be attached for the PI’s review with the final report. Documents that support findings can include flight logs and maintenance records. Enter data collected by certificate holder personnel if they are part of the evaluation, and indicate the source in the SAS automation. Team members may also document any identified program strength(s) in the comment box of the applicable SP DCT, ED DCT, EP DCT, or Custom Data Collection Tool (C DCT) question, provided it is not proprietary information.

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K. Review Evaluation Data by Team Leader (see flowchart process step 10-8-1-9K). The evaluation TL is typically the Data Quality Reviewer (DQR). In some instances, it may be necessary for the DQR to proxy the data review function to a team member other than the evaluation TL. DQR rights are granted to specific CHEP team members if necessary. If the DQR finds any critical or time-sensitive information during the review, he or she must notify the TL and PI immediately, unless the record indicates notification has already taken place.

L. Analyze and Assess Evaluation Data by Team Leader (see flowchart process step 10-8-1-9L). After all data are collected, reported, and reviewed, the evaluation team completes the evaluation using the SAS Analysis, Assessment, and Action (AAA) procedures and tools (Module 5). The TL is responsible for completing the Assessment Determination, Module 5 of the AAA, considering input from the team. The PI completes the Action Determination section of the AAA and follows through with any actions required.

M. Team Leader Makes Finalized Evaluation Report (see flowchart process step 10-8-1-9M). TLs will generate an evaluation report when requested by the Office of the Executive Director, Flight Standards Service or the divisional or Flight Standards office manager. Upon request, the ORA assigned to the certificate holder should generate a report on the data collected.

N. Determine and Implement Followup Actions (see flowchart process step 10-8-1-9N). The PI determines and implements followup actions in response to PAs and DAs completed during the evaluation.

O. CMT and PIs Brief Certificate Holder and Other Stakeholders (see flowchart process step 10-8-1-9O). The manager responsible for initiating the evaluation determines who briefs the certificate holder or other stakeholders on the results of the evaluation.

NOTE: If the CHEP identifies an issue with a DCT, policy, or automation, then use the feedback process to report that issue. When a CHEP identifies a possible improvement to a Flight Standards office process, these suggestions can be tracked in the Quality Monitoring System (QMS). The Flight Standards office should use their QMS process to improve its processes. SAS will store historical data on SAS evaluations performed, including information on systems, subsystems, and program elements assessed, for each certificate holder.

10-8-1-11 through 10-8-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 9 AIRCRAFT CONFIGURATION CONTROL DOCUMENT

Section 1 Safety Assurance System: Aircraft Configuration Control Document

10-9-1-1 REPORTING SYSTEM(S). Use Safety Assurance System (SAS) automation and the associated Data Collection Tools (DCT). Refer to SAS Elements 2.3.1 (OP) Appropriate Operational Equipment, 4.2.1 (AW) Maintenance/Inspection Requirements, and 4.4.4 (AW) Aircraft Acceptance Process.

10-9-1-3 GENERAL.

A. Purpose. This section provides information and references for the evaluation of an aircraft configuration based on Title 14 of the Code of Federal Regulations (14 CFR) part 121 airworthiness requirements. If you are a participant in the evaluation of an aircraft configuration, then this section applies to you.

B. Scope. Participants in the evaluation of an aircraft configuration should follow this process to determine if an aircraft meets the airworthiness requirements. Record all findings in the SAS automation tools. The Aircraft Configuration Control Document (ACCD) includes the following information:

- Guidance in the development of a certificate holder's aircraft conformity and acceptance programs.
- Configuration and operating requirements of part 121 subparts J and K.
- Verification of supporting documents when adding new make or model aircraft to an existing certificate holder's certificate (operations specification (OpSpec) D085).
- Regulatory and advisory guidance.

NOTE: The references in this section may not be all-inclusive and are subject to change.

10-9-1-5 BACKGROUND.

A. General Information. A review of case law relating to airworthiness reveals that an aircraft must meet two conditions to be considered "Airworthy," as defined in 14 CFR part 3, § 3.5(a). Additionally, an aircraft must be determined as eligible for the issuance of an airworthiness certificate under Title 49 of the United States Code (49 U.S.C.) § 44704(d)(1) and 14 CFR part 21, §§ 21.1(b)(1) and 21.183(a), (b), and (c)(3). Two conditions that must be met for issuance of an airworthiness certificate, as described in Volume 8, Chapter 5, Section 1 and Federal Aviation Administration (FAA) Order 8130.2, Airworthiness Certification of Aircraft, Chapter 2, Common Policies and Procedures for Issuing an Airworthiness Certificate, are:

1) The aircraft must conform to its type certificate (TC) (design). This is attained when the aircraft configuration and the engine, propeller, and articles installed are consistent

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with the drawings, specifications, and other data that are part of the TC. This includes any Supplemental Type Certificate (STC) and repairs and alterations incorporated into the aircraft.

2) The aircraft must be in a condition for safe operation. This refers to the condition of the aircraft relative to wear and deterioration (e.g., skin corrosion, window delamination/crazing, fluid leaks, and tire wear). (Refer to Order 8130.2, chapter 2.)

B. Standard Airworthiness Certificate. The aircraft must have a standard airworthiness certificate. This certificate remains valid as long as the aircraft:

1) Meets its approved type design.

2) Is in a condition for safe operation.

3) Has up-to-date maintenance and preventive maintenance.

4) Alterations are performed in accordance with 14 CFR parts 21, 43, and 91.

5) Conforms to the "Limitations" and "Supplement" sections within the approved Airplane Flight Manual (AFM).

C. Special Airworthiness Requirements in Part 121 Subpart J. The ACCD lists limited specifications for aircraft certificated under Aeronautics Bulletin 7a, Airworthiness Requirements for Aircraft; Civil Aviation Regulations (CAR) Part 4, or nontransport category airplanes TC'd after December 31, 1964; and CAR 4b.

NOTE: It is suggested to conduct further research when evaluating aircraft of this vintage.

D. Request List. Figure 10-9-1A, Request List, is a list of items the aircraft owner/operator should have available to support the aircraft and document evaluation. This list is not all-inclusive.

E. Related 14 CFR Parts that May be Listed. Title 14 CFR parts 21, 25, 33, 39, 43, 45, 47, 91, and 121.

F. Related Element Design Data Collection Tools (ED DCT) and Element Performance Data Collection Tools (EP DCT). The majority of the inspection items within this job aid contain specific regulatory requirements and are supported by the related ED/EP DCTs.

G. The Physical Inspection of the Aircraft (Including General Visual Inspection (GVI)). This inspection is a visual examination of the interior and exterior areas of the aircraft to evaluate equipment and manual requirements as required in part 121 and to detect obvious damage, failure, or irregularity. You, the aviation safety inspector (ASI), conduct this level of inspection under normally available lighting conditions, such as daylight, hangar lighting, flashlight, or drop light. This inspection may require the removal or opening of access panels or doors. Stands, ladders, or platforms may be required to access the area of inspection. Use normal

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inspection aids (as required), such as an inspection mirror, a flashlight, and a mechanic's 6-inch scale.

NOTE: This section may reference certification regulations, but they are not listed in the "References" column.

Figure 10-9-1A. Request List

Request List
Copy of the certificate holder's inspection document (configuration/conformity inspection).
Copy of the bridging (transfer) document and the Continuous Airworthiness Maintenance Program (CAMP) for the aircraft, including work cards and time limits (may be in electronic format).
The Maintenance Review Board (MRB) and Maintenance Planning Document (MPD) (manufacturer's recommended maintenance program) for the aircraft.
Aircraft Interior Configuration Document (AICD) for the interior and additional diagrams that might include location of emergency equipment, if not on the AICD.
Passenger briefing cards.
Current aircraft equipment list (as revised).
The Federal Aviation Administration (FAA) will also ensure the operator has the aircraft in its tracking system (forecast, next check due, etc.).
Flight deck checklists.
Flammability test certifications for aircraft interior materials (14 CFR part 23, § 23.2325 and part 25, § 25.853), as appropriate.
Skin mapping (repairs) and repair assessment, if applicable (14 CFR part 121, § 121.707).
Airplane Flight Manual (AFM) and company manual used in lieu of AFM, if applicable (§ 121.141).
Major Repair and Alteration Report (§ 121.707(a)(b)).
Minimum equipment list (MEL).
Pilot aircraft operating manual (§ 121.135).
Engineering Orders (EO) accomplished.
Placard diagram and/or manual.
Records required by §§ 121.380 and 121.707.
In-flight manual (flight attendant (F/A) manual) (§ 121.135).
Technical documents that firmly establish the digital flight data recorder (DFDR) parameter types and accuracies, and the latest DFDR data download, if available (§§ 121.343, 121.344, and 121.344a).
All Supplemental Type Certificates (STC) for the aircraft.

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Figure 10-9-1B. Aircraft Information Form

AIRCRAFT				
	Make/Model/Series	**Current Registration No.**	**Date of Last "Heavy" CK.**	**Aircraft Interior Configuration Document (AICD)**
			(MM/DD/YY)	**Yes No**
	Serial No.	**Previous Registration**	**Date of Last "C" CK.**	**Repair Assessment Available?**
			(MM/DD/YY)	**Yes No**
	Line or Fuselage No.	**Total Time (TT)**	**Last Operator**	**Bridging Document Available?**
			(Designator)	**Yes No**
	Date of Manufacture	**Total Cycles (TC)**	**Current Operator**	
			(Designator)	
	TC Data Sheet (No.)	**Interior Configuration**		
		(# of PAX)		

WGT				
	Operator's Empty Wgt.	**Max Structural Wgt.**	**Max Take-Off Wgt.**	**Date of Last Weighing**
				(MM/DD/YY)
	Max Zero Fuel Wgt.	**Max Taxi or Ramp Wgt.**	**Max Landing Wgt.**	**Current Acft Equip List?**
				Yes No
	Basic Operating Wgt. (BOW)			

POWERPLANT				
	Power Plant 1	**Power Plant 2**	**Power Plant 3**	**Power Plant 4**
	Make/Model/Series	**Make/Model/Series**	**Make/Model/Series**	**Make/Model/Series**
	Serial No.	**Serial No.**	**Serial No.**	**Serial No.**
	Total Time (TT)	**Total Time (TT)**	**Total Time (TT)**	**Total Time (TT)**
	Total Cycles (TC)	**Total Cycles (TC)**	**Total Cycles (TC)**	**Total Cycles (TC)**
	Time Since Overhaul (TSO)	**Time Since Overhaul (TSO)**	**Time Since Overhaul (TSO)**	**Time Since Overhaul (TSO)**
	Powerplant Type Certificate Data Sheet (No.)			

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PROPS	Propeller 1	Propeller 2	Propeller 3	Propeller 4
	Make/Model/Series	Make/Model/Series	Make/Model/Series	Make/Model/Series
	Serial No.	Serial No.	Serial No.	Serial No.
	Total Time (TT)	Total Time (TT)	Total Time (TT)	Total Time (TT)
	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)
	Propeller Type Certificate Data Sheet (No.)			

APU	Make/Model/Series	Total Time (TT)	Time Since Overhaul (TSO)	Applicable to Acft TCDS?
				Yes No
	Serial No.	Total Cycles (TC)		

LDG GEAR	Nose Gear	RH Main Gear	LH Main Gear	Other Gear Assemblies
	Make/Part Number	Make/Part Number	Make/Part Number	Make/Part Number
				/
	Serial No.	Serial No.	Serial No.	Serial Nos.
				/
	Total Time (TT)	Total Time (TT)	Total Time (TT)	Total Time (TT)
				/
	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)	Total Cycles (TC)
				/
	Time Since Overhaul (TSO)	Time Since Overhaul (TSO)	Time Since Overhaul (TSO)	Time Since Overhaul (TSO)
				/

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Table 10-9-1A. Configuration-Related Research

ITEM	CONFIGURATION-RELATED RESEARCH	REFERENCES (current editions)
1	**Aircraft History.** Review aircraft information in Federal Aviation Administration (FAA) databases and other applicable sources.	Safety Performance Analysis System (SPAS) Foreign Civil Aviation Authority (FCAA) Manufacturer, etc.
2	**Airframe Type Certificate Data Sheets (TCDS).** **a.** Compare information on the TCDS to aircraft information the certificate holder provides. **b.** Research related information, including all TCDS notes (instructions for continued airworthiness (ICA), aircraft certified with a special condition (SC), Reduced Vertical Separation Minimums (RVSM) eligibility, High Intensity Radiated Field (HIRF) requirements, basic equipment list, etc.).	14 CFR part 21, §§ 21.16, 21.21, and 21.41 FAA Order 8130.2, Airworthiness Certification of Aircraft, Chapter 8, Limited Category (§ 21.189) Volume 3, Chapter 61, Section 1
3	**Engine TCDS.** Review the applicability of the TCDS.	§ 21.41 14 CFR part 33, § 33.1
4	**Propeller TCDS.** Review the applicability of the TCDS. Verify that the propellers are approved for operation with installed engines.	§ 21.41
5	**Master Minimum Equipment List (MMEL).** Obtain a copy of the current MMEL for comparison to the certificate holder's minimum equipment list (MEL) for correct revision.	http://fsims.faa.gov/PICResults.aspx?mode=Publication&doctype=MMEL
6	A**irworthiness Directives (AD) (Airframe, Engines, Propellers, and Appliances).** Research and generate an applicable AD listing. NOTE: It may not be possible to complete the list until after reviewing the manufacturer's and operator's appliance and equipment lists.	http://www.faa.gov/regulations_policies/airworthiness_directives/

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ITEM	CONFIGURATION-RELATED RESEARCH	REFERENCES (current editions)
7	**Additional Information.** Review any other information that is available and related to the specific aircraft being evaluated (e.g., SPAS, Safety Assurance System (SAS) automation, Web-based Operations Safety System (WebOPSS) authorization reference).	Will need to enter SAS via: https://sas.avs.faa.gov/sas.internal.portal/Home/InternalPortal#/UserAdminView?Key=Select_User http://home.spas.faa.gov/splash/splash.asp NOTE: These are internal FAA sites only
8	**Review ICAs—(Maintenance Review Board Report (MRBR), Maintenance Planning Document (MPD), etc.).** Review ICAs for additional regulatory requirements (e.g., Certification Maintenance Requirements (CMR)).	Advisory Circular (AC) 121-22, Maintenance Review Boards, Maintenance Type Boards, and OEM/TCH Recommended Maintenance Procedures

Table 10-9-1B. Manuals

ITEM	MANUALS	REFERENCES (current editions)
1	**Airplane Flight Manual (AFM).** **a.** Verify that the certificate holder has a current and complete copy of the applicable manufacturer's Federal Aviation Administration (FAA)-approved AFM for the particular aircraft make, model, and serial number. **b.** Verify that all supplements are applicable, complete, and properly approved (including Airworthiness Directives (AD)). **c.** Verify that the actual aircraft configuration conforms to the supplements, which includes Supplemental Type Certificate (STC)-derived supplements. **d.** Verify all aircraft checklists, including expanded checklists, match the AFM/Airplane Operations Manual (AOM).	14 CFR part 91, § 91.9 14 CFR part 121, § 121.141

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ITEM	MANUALS	REFERENCES (current editions)
2	**Airplane Operations Manual (AOM).** **a.** If the operator elects to develop and use an AOM in lieu of the FAA-approved AFM (Item 1) to operate the aircraft, it must be current and complete with respect to the operator's master AOM and the FAA-approved AFM and supplements. It must match the subject aircraft configuration and account for the interrelationships between related systems. AOM operating procedures and performance information derived from the AFM must be accurate and clearly identified as such. AFM operating and performance information modified by the operator in the AOM must be FAA-approved. **b.** Verify that the AOM is part of the certificate holder's manual system. **c.** Verify that all AOM supplements or bulletins are appropriate and complete. **d.** Verify that the AOM is on board the aircraft, if required by the operator's manual.	§ 121.141
3	**Flight Deck Check Procedures (Checklist).** Verify that flight deck check procedures (checklists) are current and complete, properly approved, and limited to action or verification items. The operator's manual and training programs must thoroughly describe required actions and decisions for crewmembers performing a checklist.	§ 121.315 Volume 3, Chapter 32, Section 2
4	**Performance Requirements.** **a.** The performance requirements of 14 CFR part 25, §§ 25.101 through 25.125 apply to all aircraft certificated under part 25 subpart A. **b.** The performance requirements of Civil Aviation Regulation (CAR) 4b subpart B, §§ 4b.100 through 4b.125-1 apply to all aircraft certificated under CAR 4b. NOTE: Each specific aircraft's performance and limitations for existing aircraft configuration, modifications, improvements, and engine installation must be included in the particular FAA-approved AFM or AOM.	§§ 121.141, 121.173, 121.189, 121.191, 121.193, 121.195, 121.197, and 121.198 Part 121 Appendix K
5	**Minimum Equipment List (MEL).** Verify that the operator's MEL is FAA-approved, is configured to the subject aircraft, and is current with respect to the Master Minimum Equipment List (MMEL).	§ 91.213 § 121.628 Volume 4, Chapter 4, Sections 1 through 4

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ITEM	MANUALS	REFERENCES (current editions)
6	**Weight and Balance Manual (WBM) (and Cargo Loading Manual, if Applicable).** **a.** Verify that the certificate holder's approved WBM is appropriate to the make, model, and series (M/M/S) of the subject aircraft. **b.** Verify that listed weights are configured to the Type Certificate Data Sheet (TCDS), AFM/AOM, and Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control.	§ 91.605 § 121.135 Volume 3, Chapter 47 AC 120-27
7	**Flight Attendant (F/A) Manual.** If the type of aircraft requires F/As per § 121.391, verify that the operator has a current, complete, and FAA-accepted manual available. Ensure that the manual accurately depicts the cabin configuration and equipment.	§§ 121.135, 121.139, and 121.391 Volume 3, Chapter 32, Section 13
8	**Other Manual Parts by Regulation.** **a.** Verify that all manual parts required by the operator to be carried on board the aircraft are in fact on board. **b.** Verify that the manual is current, is FAA-approved or FAA-accepted (as appropriate), and accurately reflects the aircraft configuration. **c.** Verify that the operator has a system to revise and keep current all of its technical manuals (e.g., Aircraft Maintenance Manual (AMM), Illustrated Parts Catalogue (IPC), and other manuals for maintaining its aircraft). NOTE: Part 121 operators are responsible for their manual system and maintaining the currency of this manual with the source (manufacturer's) document.	§§ 121.133, 121.135, 121.139, and 121.369 Volume 3, Chapter 32, Section 11

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Table 10-9-1C. Records

ITEM	RECORDS	REFERENCES (current editions)
1	**Certificate of Airworthiness.** **a.** Does the aircraft have a properly issued U.S. Certificate of Airworthiness? **b.** Check the applicability and limitations of exemptions/deviations from the Type Certificate Data Sheet (TCDS) or other certification document. **c.** For foreign-registered aircraft, does the Foreign Civil Aviation Authority (FCAA)-issued Certificate of Airworthiness meet the regulatory requirements for the U.S. certificate holder service? (Refer to 14 CFR part 121, § 121.153(c).)	14 CFR part 21, § 21.175 § 121.153 Volume 3, Chapter 17 Volume 3, Chapter 31, Section 5 FAA Order 8130.2, Airworthiness Certification of Aircraft
2	**Maintenance Overhaul/Time Controlled/Life-Limited Items/Certification Maintenance Requirements (CMR)/Airworthiness Limitations.** **a.** Review documentation for all articles subject to time/cycle/life limits. (Are the articles tracked by nomenclature, part number, serial number, lot number, or via records the operator retains?) **b.** Review the TCDS for specific tracking requirements. **c.** Does the operator have a system to verify inspection status, overhauls, and repetitive maintenance/inspection tasks for this specific aircraft? **d.** Are the requirements of the applicable Maintenance Review Board Report (MRBR) evident in the operators program? Have all MRBR requirements been met? (See Table 10-9-1A, Configuration-Related Research, for a description.) **e.** Are the records and inspection intervals in accordance with the certificate holder's authorized Continuous Airworthiness Maintenance Program (CAMP)? **f.** Perform a sampling inspection of articles/components installed on the aircraft. (Are the articles/components maintained in accordance with the certificate holder's authorized CAMP?) **g.** Review the Low-Utilization Aircraft Maintenance Program/High Utilization Aircraft Maintenance Program, as applicable. NOTE: Are sufficient processes in place to prevent the deletion of Failure Effect Category (FEC) items 5 and 8 from the program without the approval of the Maintenance Review Board (MRB) Chairperson, the FAA MRB Chairperson, and the Original Equipment Manufacturer	§ 121.380 Volume 3, Chapter 31, Section 5 Volume 3, Chapter 64, Section 1 Volume 6, Chapter 2, Section 28 FAA Order 8110.54, Instructions for Continued Airworthiness Responsibilities, Requirements, and Contents Advisory Circular (AC) 20-62, Eligibility, Quality, and Identification of Aeronautical Replacement Parts AC 120-16, Air Carrier Maintenance Programs

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ITEM	RECORDS	REFERENCES (current editions)
	(OEM)/type certificate holder (TCH)? (See Table 10-9-1A for a description.)	
3	**Air Traffic Control (ATC) Transponder Test and Inspection.** **a.** Do the operator's records document the completion of the 24-month tests and inspection of the ATC transponder system (including altitude reporting equipment) in accordance with 14 CFR part 43 appendix F? **b.** Do the records support proper transponder reporting of the current aircraft Mode Select (Mode S) address? **c.** Do the records following any installation or maintenance on an ATC transponder where data correspondence error could have been introduced, the integrated system shows to have been tested, inspected, and found to comply with part 43 appendix E, paragraph (c)?	Part 43 Appendices E & F 14 CFR part 91, § 91.413 § 121.345
4	**Repair Assessment and Survey of Pressurized Fuselages (Damage-Tolerance (DT)-Based Inspections and Procedures).** Check the aircraft records to ensure that inspections, repairs, and alterations made to the pressure vessel of the aircraft are configured to the certificate holder's program and regulatory requirements.	Part 43 Appendix A Operations specification (OpSpec) D097 § 121.1107 Volume 6, Chapter 2, Section 28 Volume 6, Chapter 11, Section 14 FAA Order 8300.13, Repair Assessment Program AC 25.571-1, Damage Tolerance and Fatigue Evaluation of Structure AC 91-56, Continuing Structural Integrity Program for Airplanes AC 120-73, Damage Tolerance Assessment of Repairs to Pressurized Fuselages

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ITEM	RECORDS	REFERENCES (current editions)
5	**Temporary Repairs.** **a.** Check the records of temporary repairs made to the aircraft for compliance with program and regulatory requirements. **b.** Perform a spot check of the aircraft for evidence of repairs and correlate those repairs to supporting documentation.	Part 43, § 43.13 Volume 3, Chapter 36 Order 8300.13 AC 25-22, Certification of Transport Airplane Mechanical Systems AC 120-73
6	**Supplemental Type Certificates (STC).** **a.** Check that Federal Aviation Administration (FAA)-approved data support the installed STCs. **b.** Check that the installations are not partial applications of the STC. **c.** Check the installations to the data and ensure that the required changes to the operating manuals (Airplane Flight Manual (AFM) supplements) and maintenance manuals address the change. **d.** Review the instructions for continued airworthiness (ICA) provided with the STC and ensure these requirements are addressed in the operator's maintenance/inspection program and publications. **e.** Check STCs installed on the aircraft. Check for evidence that the interrelationship of the installations was reviewed and determined to be acceptable (STC requirement).	§ 91.403(d) §§ 121.367, 121.379, 121.380, and 121.707 Volume 3, Chapter 36 Volume 4, Chapter 3, Sections 1 and 3 Volume 6, Chapter 11, Section 2 Order 8110.54
7	**Airworthiness Directives (AD).** **a.** Check that the operator has a method to track the current status of all applicable ADs. The records must conform to the requirements of the certificate holder's manual. The information must be specific enough to identify each AD by: 1) The date accomplished. 2) The method of accomplishment. 3) One-time or recurring. 4) The time/date of the next required action. **b.** Do alternative methods of compliance (AMOC) satisfy an AD requirement (if applicable)? 1) Does documentation exist approving the AMOC, and does it allow the specific certificate holder to use that AMOC as a basis for compliance as specified within its text?	14 CFR part 39 § 91.403 § 121.380 Volume 3, Chapter 59, Sections 1 and 3 Volume 3, Chapter 60, Section 1 FAA Order 8110.103, Alternative Methods of Compliance (AMOC)

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ITEM	RECORDS	REFERENCES (current editions)
	2) Spot check of one-time and recurring ADs (airframe, engine, propeller, and appliance). 3) Does the operator have a system to track and report AD status and compliance?	
8	**Major Repairs and Alterations.** **a.** Review records for current major repairs and alterations for each airframe, engine, propeller (if applicable), and appliance. **b.** Is there documentation for each major repair and alteration, and was it accomplished in accordance with FAA-approved technical data? (e.g., STC, Structural Repair Manual (SRM), Designated Engineering Representative (DER), FAA field approval, etc.) **c.** Are there ICAs for each alteration and/or repair included in the certificate holder's maintenance and inspection program?	§ 43.9 Part 43 Appendix A Part 43 Appendix B §§ 121.379, 121.380, 121.707, and 121.709 Volume 6, Chapter 11, Section 2 AC 120-77, Maintenance and Alteration Data
9	**Digital Flight Data Recorder System (DFDRS) or Flight Data Recorder System (FDRS), as Applicable.** **a.** Does the certificate holder maintain the correlation data required by the applicable part 121 section? **b.** Review DFDRS or FDRS download/analysis records required by the certificate holder's manual. **c.** Check the recorder system for all required parameters. **d.** Is there a system for the analysis download and documenting discrepancies? Are those discrepancies corrected per the certificate holder's manual? **e.** Verify the record of filtered parameters.	§§ 121.343, 121.344, 121.344a, and 121.346 Part 121 Appendix B Part 121 Appendix M Volume 4, Chapter 14, Section 8 AC 20-141, Airworthiness and Operational Approval of Digital Flight Data Recorder Systems
10	**Certification Maintenance Requirements (CMR).** Verify that all CMR tasks were properly incorporated into the operator's programs (e.g., CAMP). Methods and time intervals associated with these tasks must be FAA-approved by the Aircraft Certification Office (ACO) and Flight Standards office, as applicable, in the certificate holder's OpSpecs. CMRs may be located in the applicable MRBR.	14 CFR part 119, § 119.49 § 121.367

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ITEM	RECORDS	REFERENCES (current editions)
11	**Fuel Tank Safety (FTS), Regulatory Requirements.** Section 121.1113 states that after December 16, 2008, no certificate holder may operate an airplane unless that operator has revised the maintenance program for that airplane to include applicable inspections, procedures, and limitations for the fuel tank systems. This requirement specifically addresses the "No Unsafe Condition" category, task, and intervals found in Volume 6, Chapter 11, Section 23, Paragraph 6-2697, ICA Development. This means that the operator must include in its maintenance or inspection program the TCH-developed MRBR or maintenance implementation document revisions.	§§ 121.1111, 121.1113, and 121.1117 OpSpec D097 Volume 3, Chapter 18, Section 6 Volume 6, Chapter 11, Section 23
12	**Automatic Dependent Surveillance-Broadcast (ADS-B).** On May 27, 2010, the FAA published new rules (contained in §§ 91.225 and 91.227) mandating airspace and avionics performance requirements after January 1, 2020. The avionics perform a function that is generally known as "ADS-B Out," which transmits precise location and other information about the aircraft to ground stations and other ADS-B-equipped aircraft. The ADS-B rule mandates ADS-B Out avionics performance when operating within the designated airspace, giving aircraft owners approximately 10 years to equip. The ADS-B rule, like current transponder operating requirements, requires operators to have ADS-B Out avionics installed and operating in order to fly their aircraft in the busiest airspace as described in the following: • Classes A, B, and C airspace; • All airspace at and above 10,000 feet mean sea level (MSL) over the 48 contiguous United States and the District of Columbia; • Within 30 nautical miles (NM) of airports listed in § 91.225, from the surface up to 10,000 feet MSL; and • Class E airspace over the Gulf of Mexico from the coastline of the United States out to 12 NM, at and above 3,000 feet MSL. FAA Technical Standard Orders (TSO) describe the equipment approved for ADS-B operations. The ADS-B rule states that avionics must meet the standards of either TSO-C166b, Extended Squitter Automatic Dependent Surveillance-Broadcast (ADS-B) and Traffic Information Service-Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz), for 1090ES link equipment or TSO-C154c, Universal Access Transceiver (UAT) Automatic Dependent Surveillance-Broadcast (ADS-B) Equipment Operating on Frequency of 978 MHz,	§§ 91.225 and 91.227

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ITEM	RECORDS	REFERENCES (current editions)
	for UAT link equipment. TSO-C166b is required in Class A airspace and either link can be used in all other airspace. For more information about the FAA's ADS-B program, visit http://www.faa.gov/nextgen/programs/adsb/.	

Table 10-9-1D. Inspection Program and Programs Covering Other Maintenance, Preventive Maintenance, and Alterations

ITEM	INSPECTION PROGRAM AND PROGRAMS COVERING OTHER MAINTENANCE, PREVENTIVE MAINTENANCE, AND ALTERATIONS	REFERENCES (current editions)
1	**Inspection Program and Programs Covering Other Maintenance, Preventive Maintenance, and Alterations.** If the certificate holder is adding the same make, model, and series (M/M/S) aircraft that it is operating, verify proper correlation between the operator's maintenance tasks and time limitations for its approved maintenance program. If the certificate holder does not have prior operating experience with the M/M/S aircraft being evaluated, verify that the operator-developed maintenance program for aircraft and installed components are based on the manufacturer's recommended baseline program (e.g., Maintenance Review Board Report (MRBR), Maintenance Planning Document (MPD), etc.) and other Federal Aviation Administration (FAA) requirements. In this manner, the continuing airworthiness of the aircraft and installed components is ensured, and only those tasks that are applicable and effective are performed. If the aircraft was operated under a different maintenance program by a previous operator, verify proper transition (bridging) of the previously accumulated times and/or cycles to the current certificate holder's instructions for continued airworthiness (ICA). The maintenance program must include damage tolerance rating (DTR) evaluations and structural inspection requirements. NOTE: Refer to the Maintenance Review Board (MRB) and/or Airworthiness Directives (AD), as applicable.	14 CFR part 91, § 91.409(h) 14 CFR part 119, § 119.49 14 CFR part 121, § 121.367 Volume 3, Chapter 43, Section 1 Volume 6, Chapter 2, Section 28 Volume 6, Chapter 2, Section 36 Advisory Circular (AC) 120-16, Air Carrier Maintenance Programs AC 120-73, Damage Tolerance Assessment of Repairs to Pressurized Fuselages

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ITEM	INSPECTION PROGRAM AND PROGRAMS COVERING OTHER MAINTENANCE, PREVENTIVE MAINTENANCE, AND ALTERATIONS	REFERENCES (current editions)
	Airplane Configuration Process. Verify that the certificate holder has an aircraft configuration or similar process within its manual system, and that the process results in the aircraft meeting its type design or properly altered condition. Verify that the certificate holder's inspection program and programs covering other maintenance, preventive maintenance, and alterations are acceptable to the Administrator before the aircraft is added to the operations specification (OpSpec) D085.	
2	**Very High Frequency Omnidirectional Range Station (VOR) Equipment Checks for Instrument Flight Rules (IFR) Operations.** Verify that the aircraft is included in the operator's program. Ensure that the VOR equipment of the aircraft is maintained, checked, and inspected under an approved procedure, or is operationally checked within the preceding 30 calendar-days and was found to be within the limits of the indicated permissible bearing error set forth in § 91.171. Also see related Item 4 under Table 10-9-1C, Records.	§ 91.171 § 121.367 Volume 6, Chapter 2, Section 28
3	**High Intensity Radiated Field (HIRF)/Lightning Protection Maintenance Program.** Verify that the aircraft is included and maintained in accordance with the certificate holder's HIRF maintenance and inspection programs. Refer to the MRBR and Supplemental Type Certificate (STC).	§ 121.367 Volume 3, Chapter 43, Section 1 Volume 6, Chapter 2, Section 28 AC 20-53, Protection of Aircraft Fuel Systems Against Fuel Vapor Ignition Caused by Lightning AC 20-136, Aircraft Electrical and Electronic System Lightning Protection AC 20-158, The Certification of Aircraft Electrical and Electronic Systems for Operation in the High-intensity Radiated Fields (HIRF) Environment

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ITEM	INSPECTION PROGRAM AND PROGRAMS COVERING OTHER MAINTENANCE, PREVENTIVE MAINTENANCE, AND ALTERATIONS	REFERENCES (current editions)
4	**Air Traffic Control (ATC) Transponder Tests and Inspections.** Verify that the aircraft is included and maintained in accordance with the certificate holder's program and that the program included 24-month tests and inspections of the ATC transponder systems in accordance with Title 14 of the Code of Federal Regulations (14 CFR) part 43 appendix F. Tests and inspections should include altitude reporting equipment.	Part 43 Appendix F § 91.413 § 121.367 AC 20-131, Airworthiness Approval of Traffic Alert and Collision Avoidance Systems (TCAS II) and Mode S Transponders
5	**Reduced Vertical Separation Minimums (RVSM).** If authorized to conduct RVSM operations, verify that the aircraft conforms to its RVSM data package and that the aircraft is maintained in accordance with the certificate holder's approved program.	§§ 91.3, 91.703, 91.706, and 91.180 Part 91 Appendix G Volume 4, Chapter 1, Section 5 Volume 4, Chapter 10, Section 1 AC 91-70, Oceanic and Remote Continental Airspace Operations
6	**Flight Data Recorder System (FDRS).** Verify that at a minimum, the certificate holder's maintenance program meets the requirements of AC 20-141, Airworthiness and Operational Approval of Digital Flight Data Recorder Systems.	§ 121.367 Volume 4, Chapter 14, Section 8 AC 20-141
7	**Underwater Locating Device (ULD).** Verify that operational and battery capacity tests of each ULD were performed in accordance with the certificate holder's Continuous Airworthiness Maintenance Program (CAMP).	§§ 121.343(k), 121.359, and 121.359(c)(2)(iii) Volume 4, Chapter 14, Section 8 Volume 4, Chapter 14, Section 9
8	**Corrosion Prevention and Control Program (CPCP).** Verify that the certificate holder has a CPCP. This program defines the minimum requirements for preventing or controlling corrosion problems that may jeopardize continuing airworthiness of the aircraft.	§ 121.367 Volume 3, Chapter 43, Section 1 Volume 6, Chapter 2, Section 28

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ITEM	INSPECTION PROGRAM AND PROGRAMS COVERING OTHER MAINTENANCE, PREVENTIVE MAINTENANCE, AND ALTERATIONS	REFERENCES (current editions)
	To meet these requirements, operators must have effective corrosion prevention and control procedures incorporated into the maintenance program for all airplanes reaching or exceeding the implementation age. The level of corrosion found on Principal Structural Elements (PSE) determines the effectiveness of a corrosion control program for a given airplane area.	FAA Order 8300.12, Corrosion Prevention and Control Programs AC 43-4, Corrosion Control for Aircraft For Maintenance Steering Group (MSG)-1 and -2 aircraft, refer to Order 8300.12. For all MSG-3 and above aircraft, refer to the manufacturer's MRBR and/or ADs, as applicable.
9	**Engines, Auxiliary Power Unit (APU).** Ensure the engines and APU are included and maintained in accordance with the operator's current maintenance and inspection programs. Refer to the MRBR and/or ADs (as applicable).	§ 121.367 Volume 3, Chapter 43, Section 1 Volume 6, Chapter 2, Section 28 AC 120-16
10	**Lower Landing Minimums.** If authorized to conduct Category II/III (CAT II/CAT III) Approach operations, verify that the aircraft conforms to, and is maintained in accordance with, the certificate holder's approved program. (Refer to OpSpecs C059 and C060.)	§§ 121.367, 121.369(b), and 121.567 Volume 3, Chapter 18, Section 5 Volume 4, Chapter 2, Section 11 AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach

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ITEM	INSPECTION PROGRAM AND PROGRAMS COVERING OTHER MAINTENANCE, PREVENTIVE MAINTENANCE, AND ALTERATIONS	REFERENCES (current editions)
11	**Electrical Wiring Interconnection Systems (EWIS) Maintenance Program.** Verify that the operator has an EWIS maintenance program. Text below is excerpted from § 121.1111(b): "After March 10, 2011, no certificate holder may operate an airplane identified in paragraph (a) of this section unless the maintenance program for that airplane includes inspections and procedures for electrical wiring interconnection systems (EWIS)." Submit revisions to the principal aviation safety inspector (ASI) for review and approval. Once the program is incorporated, ensure required inspections have been accomplished.	§ 121.1111 Volume 6, Chapter 11, Section 24

Table 10-9-1E. Fuselage, Exterior, Engines, and Propellers

ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCES (current editions)
1	**Radome Area.** **a.** Inspect radome, erosion cap, and lightning diverter strips for condition and security. **b.** If the radome internal area is accessible, do the following: 1) Inspect exposed electronic/electrical components for condition, security, and proper bonding/grounding (antennas, weather radar waveguide, cable and wire bundles, connectors, etc.). 2) Inspect the exposed airframe area (forward-pressure bulkhead) for condition, corrosion, damage, and repairs. When repairs are noted, including the radome, check the repair data at the certificate holder's record section for Federal Aviation Administration (FAA)-approved or FAA-accepted data.	14 CFR part 121, §§ 121.135, 121.367, and 121.369 Volume 6, Chapter 2, Section 4 Advisory Circular (AC) 43-14, Maintenance of Weather Radar Radomes
2	**Pitot Air Probes.** **a.** Inspect for proper installation, condition, and type. Probes must have a heat function (or equivalent means for preventing malfunctioning due to icing). Ports must be free of obstructions.	§§ 121.323, 121.325, 121.341, and 121.342 Volume 6, Chapter 2, Section 4

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ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCES (current editions)
	b. Visually inspect the critical surface areas around the probes for any irregularity that could impair the effectiveness of the probes. If repairs are noted, check the repair data at the certificate holder's record section for FAA-approved data.	
3	**Static Pressure Ports.** **a.** Check ports for condition. Check that all openings are free of obstructions. **b.** Visually inspect the critical surface areas around the probes for any irregularity that could impair the effectiveness of the ports. **c.** If repairs are noted, check the repair data at the certificate holder's record section for FAA-approved data.	§§ 121.313 and 121.341 Volume 6, Chapter 2, Section 4 AC 120-73, Damage Tolerance Assessment of Repairs to Pressurized Fuselages
4	**External Lights.** Inspect the proper installation, condition, and weather sealing of all external lights and light lenses. Check the operation of the following: **a.** Anti-collision lights, fuselage. **b.** Wing tip and tail white gas discharge lights (strobe lights). **c.** Exterior emergency lights (if installed). **d.** Landing lights. **e.** Taxi lights. **f.** Position lights. **g.** Wing icing detection lights. **h.** If high-intensity (strobe) lights are used, verify at the operator's record repository for the latest luminosity check. **i.** Wheel well lights (if installed).	§§ 121.323 and 121.341 AC 20-30, Aircraft Position Light and Anticollision Light Installations AC 20-74, Aircraft Position and Anticollision Light Measurements AC 43.13-2, Acceptable Methods, Techniques, and Practices—Aircraft Alterations
5	**Antennas.** Inspect for proper installation and condition, such as leading edge erosion and cracking of the composite covering. Pay particular attention to possible corrosion under antenna bases.	§§ 121.345 and 121.367 Volume 6, Chapter 2, Section 4
6	**Miscellaneous Fuselage Sensors (e.g., ice detection, total air temperature, vibration).** Inspect sensors for condition, security, and corrosion on fuselage skin.	§ 121.367 Volume 6, Chapter 2, Section 4

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ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCES (current editions)
7	**Static Dischargers.** Inspect for proper condition and security, and for the proper discharger types, quantities, and locations. Consult the appropriate aircraft documentation for the proper type. Refer to Master Minimum Equipment List (MMEL) and Configuration Deviation List (CDL) for minimum required.	§ 121.367 Volume 6, Chapter 2, Section 4
8	**Aircraft Inspection (with Doors, Compartment Doors, and Service Panels Opened; Flaps and Slats Down).** **a.** Inspect the aircraft exterior for general condition, damage, corrosion, fluid leaks, etc. Check fuel drains, fuel vents, fuel filler caps, and underwing fuel filler hard point. **b.** Check the security of attachment of control surfaces and corrosion prevention treatment application. **c.** Check wing and tail leading edges for dents and erosion. **d.** Check heating pads on top of wing surfaces above inboard fuel tanks for condition. **e.** Examine joints, seams, and skin for wrinkles, bulges, fasteners, skin erosion, corrosion, and oxidation. **f.** When dents are noted, verify at the operator's record repository and/or the aircraft maintenance log that a limit check is performed and noted. **g.** Check composite material panels for moisture contamination and bonding, delaminating, or separation of skin-bonding. **h.** Check windshield wipers for condition, security, and operation. **i.** Compare repair mapping with aircraft. Pay attention to critical areas. **j.** If repairs are noted, check the repair data at the certificate holder's record repository for FAA-approved data.	Volume 6, Chapter 2, Section 4 AC 20-116, Marking Aircraft Fuel Filler Openings With Color Coded Decals
9	**Aircraft Painting.** **a.** Check for condition, flaking, and evidence of corrosion at seams and fasteners; and for filiform corrosion under painted surfaces. **b.** Verify at the operator's record repository that accepted materials and procedures were followed, including the balancing of flight control surfaces.	Volume 6, Chapter 2, Section 4 AC 120-27, Aircraft Weight and Balance Control

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ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCES (current editions)
10	**Identification of Aircraft**. Verify that a fireproof identification plate or other approved marking is attached to the aircraft with all pertinent data as required by, and in accordance with, applicable 14 CFR parts.	14 CFR part 45, §§ 45.11 and 45.13 AC 45-2, Identification and Registration Marking
11	**Name of Certificate Holder.** Verify that the aircraft legibly displays the business name or certificate number appearing on the aircraft certificate holder's operations specifications (OpSpecs). Ensure the display is clearly visible and readable to a person standing on the ground at any time except during flight.	14 CFR part 119, § 119.9
12	**Placards, Markings, Exterior Exit Markings.** **a.** Check that all placards are properly installed at the location specified by the FAA-approved Airplane Flight Manual (AFM), aircraft type certification basis, applicable operating rules, and the operator's manual. **b.** Check that all placards and/or markings are not easily erased, disfigured, or obscured. Check that each passenger emergency exit is marked on the outside of the aircraft by a 2-inch contrasting colored band. **c.** Check that instructions for the means of opening those exits from the outside are marked on the outside of each passenger emergency exit. **d.** If the emergency exit is located only on one side of the fuselage, check that it has a conspicuous marking on the other side.	§ 121.310 AC 20-88, Guidelines on the Marking of Aircraft Powerplant Instruments (Display)
13	**Exterior Escape Route.** **a.** Check that the surface of each emergency escape route is made of slip-resistant material. **b.** Check general condition of emergency slip-resistant escape route.	§ 121.310
14	**Windows.** **a.** For passenger compartment windows, inspect for general condition, security, visibility, scratches, crazing, and condensation. **b.** For flight deck windshield, side windows, direct-view windows, or operable sliding windows, check for condition and delamination. **c.** Check condition of windshield wipers.	§ 121.313 AC 25.775-1, Windows and Windshields

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ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCES (current editions)
15	**Doors (Cabin, Cargo Compartment, Emergency Escape, Service, and Access).** **a.** Inspect all exterior doors, hatches, and servicing access panels for general condition and installation. **b.** Check for damage, corrosion, security of attachment, and the application of corrosion prevention treatment. Pay particular attention to doorjamb areas and door seals. Check doors for proper operation. **c.** Check the hold open latches on floor-level doors for general condition and proper operation. **d.** For aircraft with a ventral exit, check that it has provisions to prevent it from being opened during flight. For inward-opening doors, check for a means to prevent crowding against the door. **e.** Check that the emergency doors and/or hatches/plugs can be opened from the inside by the flightcrew, as well as from the outside of the aircraft in normal ground configuration by emergency rescue personnel. **f.** Check viewing ports for damage, deterioration, distortion, and security to permit viewing the conditions outside the exit(s) when closed. **g.** Check for a provision for a visual inspection of the door-locking mechanism to determine that doors are fully closed and locked (excluding inward-opening doors). **h.** If repairs are noted, check the repair data at the certificate holder's record repository for FAA-approved data. **i.** Check for the appropriate amount and type of exits.	§ 121.310 AC 25-17, Transport Airplane Cabin Interiors Crashworthiness Handbook AC 25.783-1, Fuselage Doors and Hatches
16	**Fuel Tank Impact Resistant Access Doors.** Inspect for general condition, security, and position marking. Refer to 14 CFR part 25, § 25.963.	§§ 121.316 and 121.1113
Engines		
17	**Engines, Mounting Structure, and Compartments.** **a.** Inspect for cleanliness, general condition, loose/missing equipment, breakage, signs of fluid leaks, corrosion, proper installation, and other indications of defects. **b.** Check fire extinguishing system components and extinguishing agent indicators (e.g., security and condition).	AC 43-206, Inspection, Prevention, Control, and Repair of Corrosion on Avionics Equipment

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ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCES (current editions)
	c. Inspect the visible inlet guide vanes and compressor and turbine blades for dents, erosion, nicks, and other irregularities. Check the electronic engine control (EEC)/full-authority digital electronic control (FADEC) unit (if installed) for general condition, corrosion, and security. **d.** Check electrical wiring for condition, proper placement (routing), and security.	
18	**Engine Nacelles.** **a.** Check for general condition, dents, scratches, loose or missing fasteners, corrosion, erosion, etc. **b.** Check acoustic panels for general condition.	AC 43-206
19	**Thrust Reversers and Blocker Doors.** Check for general condition, dents, corrosion, fluid leaks, proper installation, and indications of defects. If repairs are noted, verify at the operator's records repository repair data for FAA-approved data.	
20	**Auxiliary Power Unit (APU).** **a.** Inspect the APU for cleanliness, fire containment shrouds, and seals for general condition. **b.** Check exhaust ducts for general condition, signs of leaks, and proper mounting. **c.** Check for loose/missing equipment, breakage, signs of fluid leaks, corrosion, proper installation, and indications of defects. **d.** Check the APU EEC/FADEC unit (if installed) for general condition, corrosion, and security. **e.** Check APU compartment for general condition, corrosion, and damage. **f.** If the rear pressure bulkhead is visible, check for condition, corrosion, and evidence of damage and repairs. **g.** Check the exposed airframe structure for general condition, corrosion, damage, and repairs. **h.** Check the condition of the fire extinguishing system components and extinguishing agent indicators. **i.** Check that the power cable(s) is isolated from flammable fluid lines, or shrouded by a nonmetallic, flexible conduit in addition to the cable insulation. **j.** Check all wiring and power cables for proper attachment, routing, and security to the airframe structure.	AC 43-206 AC 39-8, Continued Airworthiness Assessments of Powerplant and Auxiliary Power Unit Installations of Transport Category Airplanes

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ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCES (current editions)
21	**Identification of Engines.** **a.** Check for the presence of a fireproof identification plate or other approved marking on each engine, as required by the referenced data. **b.** Verify the data with the operator's supplied data sheet.	§§ 45.11 and 45.13 AC 45-2 AC 45-3, Installation, Removal, or Change of Identification Data and Identification Plates on Aircraft Engines
22	**Identification of the APU.** **a.** If applicable, check for the presence of a fireproof identification plate or other approved marking containing the data required by the referenced data. **b.** Verify the data with the operator's supplied data sheet.	§§ 45.11 and 45.13 AC 45-2 AC 45-3
23	**EECs Including APU FADEC.** **a.** If applicable, check for installation and security of the EEC and mounting hardware. **b.** Check electrical cabling and connectors for general condition, corrosion, and security. **c.** Verify the installation of proper version software at the operator's records repository.	14 CFR part 33, § 33.28 AC 33.28-1, Compliance Criteria for 14 CFR § 33.28, Aircraft Engines, Electrical and Electronic Engine Control Systems
Propellers		
24	**Identification of Propellers, Propeller Blades, and Propeller Hubs.** **a.** Verify that each propeller, propeller blade, and propeller hub is identified in accordance with the referenced guidance material. **b.** Verify the data with the operator's supplied data sheet.	§§ 45.11 and 45.13 AC 45-2
25	**Propeller Inspection.** **a.** Inspect the condition and security of spinner, blades, hub, pitch locks (if installed or visible), anti/deicing slip ring, brushes and wiring (if installed), boots and electrical wiring, etc. **b.** Check composite blades for erosion, disbonding, and delamination, and check the ultraviolet coating for condition. **c.** Check leading edges for condition and attachment.	AC 43-206

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ITEM	FUSELAGE, EXTERIOR, ENGINES, AND PROPELLERS	REFERENCES (current editions)
	d. For metal blades, check for general condition and leading edges for erosion, nicks, and dents. **e.** Check the aircraft records for FAA-approved repair data.	

Table 10-9-1F. Fuselage Interior

ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
1	**Aircraft Registration.** Each aircraft must have at least one of the following documents inside it: • An effective U.S. registration certificate issued to its owner; • The second copy (pink copy) of the Aircraft Registration Application if a Certificate of Aircraft Registration has been applied for but has not yet been received; or • A registration certificate issued under the laws of an International Civil Aviation Organization (ICAO) Member State displayed in accordance with the certificate holder's requirements.	14 CFR part 47, § 47.31 14 CFR part 91, § 91.203 14 CFR part 121, § 121.153 FAA Order 8130.2, Airworthiness Certification of Aircraft
2	**Airworthiness Certificate.** Except as provided in § 91.715, there must be within the aircraft an appropriate and current airworthiness certificate. It must be the original (not a copy), and must be displayed at the cabin or flight deck entrance so that it is legible to passengers or crew, and is in accordance with the certificate holder's requirements. NOTE: For a foreign airworthiness certificate, check for the expiration date.	§§ 91.203 and 91.715 § 121.153 Volume 8, Chapter 5, Section 1
3	**Federal Communications Commission (FCC) Radio Station License.** This is required for other-than-domestic operations. This license must be issued to the aircraft operator and must be updated if the addition of the aircraft results in the operator's fleet exceeding the number of aircraft for which the license was issued. NOTE: Requirement of FCC, ICAO Article 29, Documents Carried in Aircraft; and Article 30, Aircraft Radio Equipment.	

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
4	**General Placards and Markings.** Verify the presence and inspect the condition of cabin interior placards and markings in accordance with the certificate holder's manual, Type Certificate Data Sheet (TCDS), Supplemental Type Certificate (STC), Airplane Flight Manual (AFM), and chapter 11 of the Aircraft Maintenance Manual (AMM).	§§ 121.310 and 121.317
5	**General Equipment Installation.** Inspect the proper condition, security, and configuration of equipment and systems.	§§ 121.153 and 121.367
6	**Flight Deck Voice Recorder.** Large, turbine-engine-powered, or large pressurized airplanes with multiengine aircraft having a passenger seat configuration with more than 10 seats, must have an approved flight deck voice recorder installed. Check for proper condition (e.g., color of recorder case and reflective tape), security, and configuration.	§ 91.609 § 121.359 Volume 4, Chapter 14, Section 9
7	**Flight Data Recorder System (FDRS).** Check for proper condition (e.g., color of recorder case and reflective tape), security, and configuration.	§ 91.609 Volume 4, Chapter 14, Section 8
8	**Compartment Interiors/Fire Resistance.** **a.** Look on the backs of cushions to identify if the seats have been fire-blocked. The cushions must meet the requirements of 14 CFR part 25, § 25.853(c). Review documentation of flame testing. This includes material for walls, furnishings, and ceiling. **b.** The following is excerpted from § 121.312(e): "(e) Thermal/acoustic insulation materials. For transport category airplanes type certificated after January 1, 1958: (1) For airplanes manufactured before September 2, 2005, when thermal/acoustic insulation is installed in the fuselage as replacements after September 2, 2005, the insulation must meet the flame propagation requirements of § 25.856 of this chapter, effective September 2, 2003, if it is: (i) Of a blanket construction or (ii) Installed around air ducting. (2) For airplanes manufactured after September 2, 2005, thermal/acoustic insulation materials installed in the fuselage must meet the flame propagation requirements of § 25.856 of this chapter, effective September 2, 2003.	§ 25.853(c) §§ 121.215, 121.312, and 121.312(e) Advisory Circular (AC) 20-178, Flammability Testing of Aircraft Cabin Interior Panels After Alterations

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	(3) For airplanes with a passenger capacity of 20 or greater, manufactured after September 2, 2009, thermal/acoustic insulation materials installed in the lower half of the fuselage must meet the flame penetration resistance requirements of § 25.856 of this chapter, effective September 2, 2003."	
9	**Fuselage Interior (Cabin and Equipment Compartments).** **a.** Inspect interior and compartments for cleanliness, general condition, loose and/or missing equipment, deterioration, leakage, corrosion, proper installations, and other indications of defects. Pay particular attention to control cables and fluid lines. **b.** Inspect for the proper application of corrosion prevention treatments in the forward and rear pressure bulkheads, interior, and accessible under-floor areas.	§ 121.367 Volume 6, Chapter 2, Section 6
10	**Lavatory Placard.** The lavatory must have a sign or placard stating, "Federal Law provides for a penalty of up to $2,200 as applicable, for tampering with the smoke detector installed in this lavatory."	14 CFR part 13, § 13.301 § 121.317 Volume 6, Chapter 2, Section 4
11	**Ashtrays.** If smoking is allowed in any other compartment occupied by the crew or passengers, an adequate number of self-contained, removable ashtrays must be provided for all seated occupants. Lavatories must have self-contained, removable ashtrays located conspicuously on or near the entry side of each lavatory door, except that one ashtray may serve more than one lavatory door if it can be seen readily from the cabin side of each lavatory served.	§ 121.215 AC 25-17, Transport Airplane Cabin Interiors Crashworthiness Handbook
12	**Waste Receptacle.** Each receptacle used for the disposal of flammable waste material must be fully enclosed, constructed of at least fire resistant materials, and must be able to contain fires likely to occur in it under normal use. The capability of the receptacle to contain those fires under all probable conditions of wear, misalignment, and ventilation expected in service must be demonstrated by test. Airworthiness Directive (AD) 74-08-09, Various Transport Category Airplanes, requires operators to inspect all lavatory paper and linen waste receptacle enclosure access doors and disposal doors for proper operation, fit, sealing, and latching for the containment of possible trash fires. A placard containing the legible words "No Cigarette Disposal" must be located on or near each disposal receptacle door.	§ 121.215 AD 74-08-09

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
13	**Ventilation.** Each passenger or crew compartment must be suitably ventilated. Where partitions between compartments have louvers or other means that allow air to flow between compartments, there must be a means convenient to the crew for closing the flow of air through the partitions, when necessary. NOTE: Emphasize with new or altered interiors (STC).	§ 121.219 (as applicable)
14	**Carriage of Cargo in Passenger Compartments.** **a.** Ensure that each compartment or area used for the stowage of cargo and/or baggage provides protection to the passengers and crewmembers from injury by its contents. **b.** Ensure that there are provisions to prevent the cargo/baggage from becoming a hazard by shifting. **c.** Ensure that a compartment used for stowage is placarded for its weight limits. **d.** Ensure that the cargo bin in the passenger compartment has been approved and that it meets the required guidelines, as outlined in § 121.285(b) (e.g., marking, exit-restrictions, obscuration of safety information to passenger's view, fully enclosed, etc.).	§§ 121.285 and 121.589 Volume 3, Chapter 33, Section 6 AC 121-29, Carry-on Baggage
15	**Galleys/Service Centers.** Verify proper approval. Inspect the following: trash bin lids for fit, storage compartment restraints, stationary cart tie-downs, lower lobe equipment and restraints, lift operation, and galley supplies stowage.	§ 121.367
16	**Stowage Compartments.** Check weight restriction placards and the doors for proper latching, if applicable. Each compartment for the stowage of cargo, baggage, carry-on articles, and equipment (such as life rafts), and any other stowage compartment must be designed for: **a.** Its placarded maximum weight of contents. **b.** The critical load distribution at the appropriate maximum load factors corresponding to the specified flight and ground load conditions.	§§ 121.285 and 121.589 AC 121-29 Volume 3, Chapter 33, Section 6

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	If the airplane has a passenger seating configuration (excluding pilots' seats) of 10 seats or more, each stowage compartment in the passenger cabin (except for under-seat and overhead compartments for passenger convenience) must be completely enclosed. There must be a means to prevent the contents in the compartments from becoming a hazard by shifting under the specified loads. For stowage compartments in the passenger and crew cabin, if the means used is a latched door, the design must consider in-service wear and deterioration.	
17	**Retention of Items of Mass in Passenger and Crew Compartments and Galleys.** Means must be provided to prevent each item of mass (that is part of the airplane type design) in a passenger or crew compartment or galley from becoming a hazard by shifting under the appropriate maximum load factors corresponding to the specified flight and ground load conditions, and to the emergency landing conditions of § 25.561(b).	§ 91.523 §§ 121.576 and 121.589 Volume 3, Chapter 33, Section 6
18	**Pax Recovery Plan.** Each certificate holder conducting domestic or flag operations must show that it has an approved system for obtaining, maintaining, and distributing to appropriate personnel current aeronautical data for each airport it uses to ensure a safe operation at that airport. The aeronautical data must include the following: • Airports, • Facilities, and • Public Protection. After February 15, 2008, for Extended Operations (ETOPS) beyond 180 minutes or operations in the North Polar area and South Polar area, this includes facilities at each airport or in the immediate area sufficient to protect the passengers from the elements and to see to their welfare. AC 120-42, Extended Operations (ETOPS and Polar Operations) states: "A minimum of two cold weather anti-exposure suits must be on board each airplane, so that outside coordination at a diversion airport with extreme climatic conditions can be accomplished safely. A short term MEL relief for this item may be granted provided the certificate holder has arranged ground support provisions for providing such protective clothing at alternate airports. The FAA may also relieve the certificate holder from this requirement during those periods of the year when the seasonal temperature makes the equipment unnecessary."	§§ 121.97 and 121.135 Volume 3, Chapter 18, Section 4 Volume 4, Chapter 1, Section 5 AC 120-42 OpSpec B055

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	The passenger recovery plan is approved in operations specification (OpSpec) B055 and states that airplanes are to be equipped with a minimum of two cold weather anti-exposure suits.	
19	**Emergency Equipment for Extended Overwater Operations/Uninhabited Terrain Areas.** Ensure the following for each item of emergency and flotation equipment: **a.** Is regularly inspected in accordance with inspection periods established in the OpSpecs to ensure its condition for continued serviceability and immediate readiness to perform its intended emergency purposes. **b.** Is readily accessible to the crew, and regarding equipment located in the passenger compartment, to passengers. **c.** Is clearly identified and marked to indicate its method of operation. **d.** Is stored in a compartment or container marked as to its contents. The compartment, container, or the item must indicate date of last inspection.	§§ 121.309, 121.339, and 121.353 Volume 3, Chapter 18, Section 4 OpSpec/MSpec B055 AC 120-42 AC 120-47, Survival Equipment for Use in Overwater Operations
	Life Preservers. Ensure that the aircraft is equipped with an approved flotation means for each occupant. Each life preserver shall meet the applicable Technical Standard Order (TSO) and must: **a.** Be equipped with an approved survivor locator light. **b.** Be readily removable from the airplane.	§ 91.509 § 121.339 AC 120-47
	Life Rafts. Ensure the aircraft is equipped with enough life rafts of a rated capacity to accommodate the occupants of the airplane. **a.** Ensure the rafts have approved survivor locator lights. **b.** Ensure that the total capacity of the equipped rafts will accommodate all the passengers of the airplane in the event there is a loss of one raft with the largest capacity. NOTE: Life raft deviation allowed with OpSpec A013.	§ 121.339 AC 120-47
	Survival Kits. Must be attached to each required life raft and appropriate for each route(s) flown.	§ 91.509 §§ 121.339 and 121.353 AC 120-47

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	Pyrotechnic Signaling Device. Ensure there is at least one device for each life raft. Uninhabited terrain: suitable pyrotechnic devices.	§ 91.509 §§ 121.339 and 121.353 AC 120-47
	Survival Emergency Locator Transmitters (ELT). **a.** Check for proper approval. **b.** Check for the expiration date. **c.** Refer to §§ 121.339 and 121.353 for battery information.	§ 91.509 §§ 121.339 and 121.353 AC 120-47
20	**Oxygen Equipment and Supply (Drop-Down Oxygen Masks).** Verify: **a.** Oxygen pressure vessel inspections comply with the Department of Transportation (DOT) (if applicable). **b.** Continuous flow oxygen mask assemblies meet the requirements of TSO-C64b, Passenger Oxygen Mask Assembly, Continuous Flow. **c.** Demand-type oxygen regulators meet the requirements of TSO-C89a, Crewmember Oxygen Regulators, Demand. **d.** Hydrostatic test dates of all fixed oxygen bottles (if applicable). **e.** Aircraft documents properly describe distribution of the oxygen masks in the passenger compartment, ensuring that the quantity of oxygen masks exceeds the number of seats by at least 10 percent. **f.** The 10 percent of extra oxygen masks are uniformly distributed throughout the cabin. **g.** Each lavatory oxygen-dispensing unit is equipped with two oxygen masks. **h.** Each lavatory oxygen-dispensing unit above the flight attendant (F/A) jump seats is equipped with two oxygen masks. Since flightcrews have been made aware of AD 2011-04-09, Various Transport Category Airplanes Equipped With Chemical Oxygen Generators Installed in a Lavatory, by the actions in the individual notices and these procedures were to be applied for a limited time (30 calendar-days) only, the procedures are no longer considered necessary and are not included in this AD.	§ 91.211 § 121.333 TSO-C64b TSO-C89a

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	NOTE: Flightcrews are made aware of corrective actions taken as a result of an airplane lavatory(ies) modified by AD 2011-04-09, since maintenance activities are recorded and available to the flightcrew using existing maintenance procedures. **i.** All oxygen masks are designed to cover the nose and mouth, and are equipped with a means to secure the mask to a person's face.	
21	**Emergency Equipment.** Check to ensure that each item of emergency and flotation equipment listed below: **a.** Is readily accessible to the crew, and, regarding equipment located in the passenger compartment, to passengers. **b.** Is clearly identified and clearly marked to indicate its method of operation. **c.** Is in a compartment or container marked as to its contents; and the compartment, container, or the item, must indicate the date of last inspection. **d.** Meets preflight requirements per the F/A manual and/or the Flight Operations Manual (FOM), as applicable.	§ 91.513 § 121.309
	Portable Oxygen Bottles (POB). Check: **a.** That the required number(s) of POBs are on board and that the POBs provide oxygen flow of at least 4 liters per minute, but not less than 2 liters per minute. **b.** That each POB has its own mask and tubing, and that the crew can determine if oxygen is being delivered. **c.** That the continuous flow oxygen mask assemblies meet the requirements of TSO-C64b. **d.** That the oxygen pressure vessel inspections comply with the DOT. **e.** The hydrostatic test dates.	§§ 121.329 and 121.333
	Flotation Devices (Non-Extended Overwater Operations). Verify that: **a.** The aircraft is equipped with an approved (TSO-C72c, Individual Flotation Devices) flotation means for each occupant (includes lap children). **b.** The flotation means are within easy reach of each seated occupant.	§ 121.340 AC 20-56, Marking of TSO-C72b Individual Flotation Devices

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	c. The flotation means are readily removable from the airplane.	
	Hand Fire Extinguishers. **a.** Ensure that each extinguisher is an approved type, and that the type and quantity of extinguishing agent is the most suitable for the kinds of fires that are likely to occur in the compartment. Fire extinguishers are properly serviced, safetied, tagged, and stowed. **b.** Check the extinguishers to ensure they meet the preflight requirements in the F/A manual or FOM. **Passenger Compartment.** **a.** Ensure that fire extinguishers are conveniently located. If more than two are installed, ensure uniform distribution. **b.** For the required quantities of extinguishers, refer to § 121.309(c)(5). **c.** Ensure that at least one extinguisher contains Halon 1211 or equivalent. **Galley Compartments.** Ensure that at least one hand fire extinguisher is conveniently located and easily accessible for use in the galley. **Class E Cargo Compartments.** Ensure the availability of at least one hand fire extinguisher that is conveniently located and accessible for crewmembers during flight.	§ 91.513 § 121.309 Volume 6, Chapter 2, Sections 4 and 8 AC 20-42, Hand Fire Extinguishers for Use in Aircraft
	Megaphones. Ensure that the aircraft is equipped with one megaphone for more than 60 passengers and two for more than 99 passengers. Ensure that each is properly secured.	§ 91.513 § 121.309 Volume 6, Chapter 2, Section 4
	Portable Lights. Ensure that the aircraft is equipped with a flashlight stowage provision that is accessible from each F/A seat.	§ 121.310

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	Protective Breathing Equipment (PBE). **a.** If there is a Class A, B, or E cargo compartment, ensure that PBE is installed for the use of appropriate crewmembers. **b.** Ensure that PBE is installed in each isolated, separate compartment in the airplane, including upper and lower lobe galleys, in which crewmember occupancy is permitted during flight for the maximum number of crewmembers expected to be in the area during any operation. Refer to § 25.1439 for requirements. **c.** Ensure the PBE meets the requirements of TSO-C99a, Flight Deck (Sedentary) Crewmember Protective Breathing Equipment. **d.** Ensure the PBE meets the preflight requirement in the F/A manual or FOM (refer to § 121.337(c)). Ensure the PBE is within 3 feet of the required fire extinguisher(s) (refer to § 121.337(b)(9)).	§ 25.1439 § 121.337(c) Volume 6, Chapter 2, Section 4
22	**Emergency Medical Equipment.** **First Aid Kits.** **a.** Ensure the minimum number of first aid kits are on board (refer to part 121 appendix A for requirements). **b.** Ensure the first aid kits meet the contents that are required by part 121 appendix A. **c.** Ensure that the first aid kits meet the preflight requirements in the F/A manual or FOM. NOTE: Arm and leg splints may not fit in the first aid kit. They are to be stowed in a readily accessible location that is near the kit.	§ 91.513 § 121.803 Part 121 appendix A Volume 6, Chapter 2, Section 4 AC 121-33, Emergency Medical Equipment
	Emergency Medical Kit. **a.** Ensure that the emergency medical kit meets the content requirements of part 121 appendix A. NOTE: If all of the required items do not fit into one container, then more than one container may be used. **b.** Ensure that it meets the preflight requirements as set forth in the F/A manual or FOM.	§ 121.803 Part 121 appendix A Volume 6, Chapter 2, Section 4 AC 121-33

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	Automated External Defibrillators (AED). **a.** Ensure that at least one approved AED is stored in the passenger cabin. **b.** Ensure that it meets the preflight requirements in the F/A manual or the FOM. **c.** Ensure that it meets the TSO requirements for power sources, effective April 30, 2005. **d.** Ensure that it is maintained according to the manufacturer's specifications. NOTE: Airplanes with an F/A and a payload of more than 7,500 pounds must have AEDs.	§ 121.803 Part 121 appendix A AC 121-33
23	**Passenger Seats, Berths, Safety Belts, and Harnesses.** Verify that: **a.** Seats do not block the emergency escape exit. NOTE: Verify seat backs are not capable of reclining to interfere with passenger egress. **b.** Seats are secure in seat track (random sample). **c.** Seat break-over pressure is in accordance with operator's maintenance program (random sample). **d.** The "Fasten Seatbelt While Seated" placards are viewable from all seats. **e.** Seatbelts have metal-to-metal latches and are in good condition (random sample). **f.** Each seat, berth, safety belt, and harness (if installed) is designed so that a person properly using these devices will not suffer serious injury in an emergency landing. **g.** Each passenger seat or berth is equipped with a safety belt (TSO-C22g, Safety Belts) with a metal-to-metal latching device. **h.** Each seat and berth is normally approved by TSO-C39c, 9g Transport Airplane Seats Certified by Static Testing, or other approved methods. For sideward-facing seats, ensure that a safety belt and shoulder harness (TSO-C114, Torso Restraint Systems) will prevent the head from contacting any object that would injure the person sitting in such a seat. **i.** Each occupant is protected from head injury by a safety belt when there are no objects within head strike range that would cause injury. Ensure a safety belt plus a cushioned rest supports the arms, shoulders, head, and spine.	§§ 91.107 and 91.521 §§ 121.311 and 121.317 Volume 6, Chapter 2, Section 8

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	j. If the seat backs do not provide a firm handhold, there is a handgrip or rail along each aisle (seat back break-over). **k.** Any projecting object that could cause injury is padded to ensure that people who are seated or moving about the airplane in normal flight will not be injured. **l.** There are no more than three seats on each side of the aisle if the aircraft has a single aisle.	
24	**Cabin Attendant Seats, Berths, Safety Belts, and Harnesses.** Pull the jump seat down to ensure it retracts (those in path of exits). The seats should be positioned so that when not in use, they will not interfere with the use of the passageways and exits. **a.** If applicable, ensure that the jump seat retracts automatically. **b.** Ensure that F/A jump seats are in the passenger compartment near approved floor-level emergency exits, unless another location has been approved. **c.** Ensure that each F/A jump seat position is equipped with a combination shoulder harness and lap belt that has a single-point, metal-to-metal latching system. **d.** Inspect seatbelts for proper approval (e.g., TSO-C22g or equivalent), metal-to-metal latching, and general condition. **e.** Ensure the torso restraint meets the requirements of TSO-C114 or equivalent. **f.** Ensure that the shoulder harness/lap belt has a means to be secured when not in use to prevent rapid egress in an emergency. **g.** Ensure that the F/A, when seated, has a direct view of the cabin that they are responsible for without compromising their proximity to the floor level exit. **h.** Ensure that the F/A jump seats are located in an area that would minimize the probability that the occupants would suffer injury by being struck by items that were dislodged from service areas, stowage compartments, or service equipment. **i.** If the aircraft was manufactured after March 6, 1980, verify that F/A jump seats provide a direct view of the cabin area for which the occupant of each of the seats is responsible. Direct view is defined as a view (without head movement) of at least 50 percent of the entire passenger seating areas, at least 25 percent of any zone, and 100 percent of passenger aisles.	§ 91.521 § 121.311 AC 25.785-1, Flight Attendant Seat and Torso Restraint System Installations

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
25	**Width of Aisle.** Ensure that the width of the aisle at any point between passenger seats meets the requirements of § 25.815.	§ 121.291 Volume 6, Chapter 2, Section 4
26	**Passenger Safety Information Briefing Cards.** While on board the aircraft, perform a random sampling of the passenger briefing cards to ensure its proper distribution, that it is conveniently located for each passenger, and that the card: **a.** Includes information that is consistent with the information contained in the air carrier's manuals and pertinent to that type and model of aircraft. **b.** Contains diagrams of and methods of operating the emergency exits. Ensure that the cards concur with the placards located on and/or near the emergency exits. **c.** If applicable, contains instructions necessary for the use of emergency equipment. **d.** Meets all of the requirements of § 121.585(d) and (e) regarding exit row seating. A separate card may have been designed specifically for the exit row seated passengers; ensure that it meets the above listed requirements.	§§ 121.571 and 121.585 Volume 6, Chapter 2, Sections 4 and 8 AC 121-24, Passenger Safety Information Briefing and Briefing Cards
27	**"Fasten Seatbelt" Signs.** **a.** Signs that notify when seatbelts should be fastened and that are installed to comply with the operating rules of this chapter must be operable by a member of the flightcrew, and when illuminated, must be legible under all probable conditions of cabin illumination to each person seated in the cabin. Symbols that clearly express the intent of the sign or placard may be used in lieu of letters. **b.** Ensure that at least one legible sign or placard that reads "Fasten Seatbelt While Seated" is visible from each passenger seat.	§ 121.317
28	**Doors (Other than Flight Deck).** Lavatory doors must be designed to ensure that no one will become trapped inside, and if equipped with a locking device, it must be capable of being unlocked from the outside without the aid of special tools. If there is a door that separates the passenger cabin from other areas, and it is necessary to pass through the doorway to reach any required emergency exit, the door must have a means to latch it in the open position. The door must be open for each takeoff and landing. If the airplane is equipped with a crew rest area that has separate entries from the flight deck and the	§ 121.313

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	passenger compartment, the door between the crew rest area and the passenger compartment must have a locking means.	
29	**Door Placard.** A placard is required on each door that is the means of access to a required passenger emergency exit, to indicate that it must be open during takeoff and landing.	§ 121.313
30	**Emergency Exits.** **a.** Ensure that the number of emergency exits meets or exceeds requirements of the passenger seating configuration. **b.** If applicable, ensure that the step down distance for Types II, III, and IV exits meet § 25.807. **c.** For an airplane that is required to have more than one emergency exit for each side of the fuselage, no passenger exit may be more than 60 feet from any adjacent passenger emergency exit on the same side, same deck, as measured parallel to the airplane's longitudinal axis between the nearest exit edges. **d.** A ventral or tailcone exit must be designed and constructed so that it cannot be opened during flight. It must be marked with a placard that is readable from 30 inches away. The placard must be placed conspicuously near the means for opening the exit; it must state that the exit was designed and constructed so that it cannot be opened during flight. **e.** Passenger compartment emergency exits that are in excess of the minimum number of required emergency exits must be readily accessible and meet all of the applicable provisions of § 121.310(f).	§ 121.310 AC 25-17
31	**Emergency Evacuation.** Ensure that each crew and passenger area has an emergency means to allow rapid evacuation in crash landings with landing gear extended or retracted. (Refer to § 25.803.) **a.** Passageways that lead to emergency exits must be unobstructed. **b.** There must be adequate space to allow crewmember(s) to assist in the evacuation of passengers.	§ 121.310

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32	**Emergency Exit Markings.** Verify that: **a.** Each passenger emergency exit, its means of access, and its means of opening must be conspicuously marked. Means must be provided to assist occupants in locating exits in conditions of dense smoke. **b.** The identity and location of each passenger emergency exit must be recognizable from a distance equal to the width of the cabin. **c.** A sign visible to occupants approaching along the main aisle must indicate the location of each emergency exit. **d.** There must be a locating sign: 1) Above the aisle near each over-the-wing passenger emergency exit, or at another ceiling location if it is more practical because of low headroom. 2) Next to each floor-level passenger emergency exit (one sign may serve two exits if both can be readily seen from the sign). 3) On each bulkhead or divider that prevents fore and aft vision along the passenger cabin (if this is not possible, the sign may be placed at another appropriate location). **e.** Each passenger emergency exit locator sign and each passenger emergency exit marking sign must have red letters at least 1½ inches high on an illuminated white background. NOTE: The above colors can be reversed. **Emergency Exit Operating Handles.** **a.** For an aircraft in which the type certification (TC) was filed before May 1, 1972, the location of each passenger emergency exit operating handle, and instructions for opening the exit, must be shown by a marking on or near the exit that is readable from 30 inches away. **b.** For Types I and II emergency exits with a locking mechanism released by rotary motion of the handle, the instructions must be shown by: 1) A red arrow with a shaft at least ¾ inch wide and a head twice the width of the shaft. 2) The word “open” in red letters, 1 inch tall, placed horizontally near the head of the arrow. **c.** Each Type A, B, C, I, or II passenger emergency exit operating handle must be self-illuminated or be conspicuously located and well illuminated by the emergency lighting even in conditions of occupant crowding at the exit.	§ 121.310 Volume 6, Chapter 2, Sections 4 and 8

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	d. Type III exits must be placarded with the weight of the exit and indicating an appropriate location to place the hatch after removal.	
33	**Emergency Lighting.** **a.** Inspect the interior and exterior emergency lighting and escape path markings to the applicable airworthiness and operating rules, and to its approved configuration (STC, TC, etc.). **b.** Verify the system is designed so that each light is manually operable, both from the flight deck and from a point in the passenger cabin that is readily accessible to the F/A seat. **c.** The lights must be safeguarded to prevent inadvertent operation. **d.** Verify that each light has a flight deck control device that has an "on," "off," and "armed" position. **e.** There must be a flightcrew warning light that illuminates when power is on in the airplane and the emergency lighting control device is not armed. **f.** Ensure that the system, when activated, illuminates each passenger exit marking and locating sign, and includes floor proximity lighting emergency escape path markings that meet the requirements of § 25.812.	§ 121.310 AC 25.812-1, Floor Proximity Emergency Escape Path Marking AC 25.812-2, Floor Proximity Emergency Escape Path Marking Systems Incorporating Photoluminescent Elements
34	**Emergency Evacuation Assist Means.** Verify that each exit (other than over-wing exits) that is higher than 6 feet from the ground has an approved means to assist the occupants to the ground (slides, ramp/slides, etc.). For floor-level exits, verify that: **a.** Slide-bottle pressures are within acceptable levels. **b.** Slide containers are properly marked for content (as applicable). **c.** Slides meet the requirements of TSO-C69c, Emergency Evacuation Slides, Ramps, Ramp/Slides, and Slide/Rafts.	§ 25.810 § 121.310
35	**Lavatory Fire Protection.** The following is excerpted from § 121.308(a) and (b): "…no person may operate a passenger-carrying airplane unless each lavatory in the airplane is equipped with a smoke detector system or equivalent that provides a warning light in the cockpit or provides a warning light or audio warning in the passenger cabin which would be readily detected by a flight attendant, taking into consideration the positioning of flight attendants	§ 121.308

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ITEM	FUSELAGE INTERIOR	REFERENCES (current editions)
	throughout the passenger compartment during various phases of flight. "…each lavatory in the airplane is equipped with a built-in fire extinguisher for each disposal receptacle for towels, paper, or waste located within the lavatory. The built-in fire extinguisher must be designed to discharge automatically into each disposal receptacle upon occurrence of a fire in the receptacle."	
36	**Crewmember Interphone System.** For airplanes with a seating capacity for more than 19 passengers, verify the installation of a crewmember interphone system independent of the public address (PA) system required by § 121.318, except for handsets, headsets, microphones, selector switches, and signaling devices that meet the requirements of the applicable airworthiness and operating rules.	§ 121.319
37	**PA System.** For airplanes with a seating capacity for more than 19 passengers, verify installation of an approved PA system that meets the requirements of the applicable airworthiness and operating rules.	§ 121.318
38	**Automatic Type ELT.** Verify that the unit is approved (e.g., TSO-C126b, 406 MHz Emergency Locator Transmitter (ELT)) and properly installed for those operations not exempt from the applicable operating rule. For new installations after June 21, 1995, the installed unit may not have been approved under TSO-C91a, Emergency Locator Transmitter (ELT) Equipment.	§§ 91.205 and 91.207 § 121.353(b) TSO-126b

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Table 10-9-1G. Flight Deck

ITEM	FLIGHT DECK	REFERENCES (current editions)
1	**Two-Way Radio Communications Systems.** For 14 CFR part 25 aircraft, verify the installation of two complete two-way radio communications systems, with controls for each accessible from each pilot station, designed and installed so that failure of one system will not preclude operation of the other system. The systems must include two microphones and two headsets (or one headset and one speaker). For non-part 25 aircraft, verify that the installation meets the basic requirements for at least one complete radio communications system for instrument flight rules (IFR) operations. For overwater and extended overwater operations, two complete communication systems must be installed. Those systems must include two microphones and two headsets (or one headset and one speaker). For extended overwater operations, the two systems must be independent.	14 CFR part 91, §§ 91.205 and 91.511 14 CFR part 121, §§ 121.345, 121.347, and 121.349
2	**Two-Way Radio Communications System (or Other Means of Communication Approved by the Administrator).** For communications between each airplane and the appropriate dispatch office, and between each airplane and the appropriate air traffic control (ATC) unit, except as specified in § 121.351(c). Determine the certificate holder's method of compliance with § 121.99. Based on that determination, ensure that the necessary equipment is properly approved and installed in the subject aircraft.	§§ 121.99 and 121.351
3	**Radio Navigation Systems.** For part 25 aircraft, verify the installation of two-radio navigation systems, with controls for each accessible from each pilot station, designed and installed so that failure of one system will not preclude operation of the other system. Notwithstanding the above, for all aircraft, verify the installation of the equipment required by the referenced operating rules and the operations specifications (OpSpecs) for specific operational approvals.	§§ 91.205 and 91.511 §§ 121.345, 121.347, 121.349, 121.351, and 121.355 Part 121 appendix G
4	**Collision Avoidance System.** Verify that the operator's aircraft has the appropriate collision avoidance system equipment installed. **a.** Turbine-powered airplanes of more than 33,000 pounds maximum certificated takeoff weight must be equipped with an appropriate class of Mode Select (Mode S) transponder that meets Technical Standard Order (TSO)-C112, Air Traffic Control Radar Beacon System/Mode Select (ATCRBS/Mode S)	§ 91.221

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ITEM	FLIGHT DECK	REFERENCES (current editions)
	Airborne Equipment, or a later revision, and one of the following approved units: 1) Traffic Alert and Collision Avoidance System (TCAS) II that meets TSO-C119b, Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II, version 7.0, or a later version. 2) TCAS II that meets TSO-C119a, Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II, version 6.04A Enhanced, that was installed in that airplane before May 1, 2003. If that TCAS II (version 6.04A Enhanced) no longer can be repaired to TSO-C119a standards, it must be replaced with a TCAS II that meets TSO-C119b (version 7.0), or a later version. 3) A collision avoidance system equivalent to TSO-C119b (version 7.0), or a later version, capable of coordinating with units that meet TSO-C119a (version 6.04A Enhanced), or a later version. **b.** Passenger or combination cargo/passenger airplanes that have a passenger seat configuration of 10–30 seats must be equipped with either: 1) TCAS I that meets TSO-C118, Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS I, or a later version; 2) A collision avoidance system that has a TSO-C118, or a later version; or 3) A collision avoidance system and Mode S transponder that meet subparagraph 10-9-1-5A1). **c.** Piston-powered airplanes of more than 33,000 pounds maximum certificated takeoff weight must be equipped with one of the following: 1) TCAS I that meets TSO-C118, or a later version. 2) A collision avoidance system equivalent to maximum TSO-C118, or a later version. 3) A collision avoidance system and Mode S transponder that meet TSO-C112, or a later version, and one of the following approved units: a) TCAS II that meets TSO-C119b (version 7.0), or a later version.	§ 121.356 Volume 4, Chapter 14, Section 2 Advisory Circular (AC) 20-131, Airworthiness Approval of Traffic Alert and Collision Avoidance Systems (TCAS II) and Mode S Transponders

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ITEM	FLIGHT DECK	REFERENCES (current editions)
	b) TCAS II that meets TSO-C119a (version 6.04A Enhanced) that was installed in that airplane before May 1, 2003. If that TCAS II (version 6.04A Enhanced) can no longer be repaired to TSO-C119a standards, it must be replaced with a TCAS II that meets TSO-C119b (version 7.0), or a later version. c) A collision avoidance system equivalent to TSO-C119b (version 7.0), or a later version, capable of coordinating with units that meet TSO-C119a (version 6.04A Enhanced), or a later version.	
5	**ATC Transponder.** Verify that the installation of a transponder that meets the requirements of § 91.215. If installed on or before January 1, 1992, the transponder must meet TSO-C74b, Airborne ATC Transponder Equipment; TSO-C74c, Airborne ATC Transponder Equipment, as appropriate (provided that the equipment was manufactured before January 1, 1990); or the appropriate class of TSO-C112 (Mode S). If installed after January 1, 1992, the transponder must be the appropriate class of TSO-C112 (Mode S). NOTE: "Installation" does not include temporary installation of TSO-C74b or TSO-C74c (as appropriate) substitute equipment during maintenance of the permanent equipment, reinstallation of equipment after temporary removal for maintenance, or for fleet operations, installation of equipment in a fleet aircraft after removal of the equipment for maintenance from another aircraft in the same operator's fleet.	§ 91.215 § 121.345 Volume 4, Chapter 14, Section 2 AC 91-50, Importance of Transponder Operation and Altitude Reporting
6	**Airborne Weather Radar System.** Persons may not operate any transport category airplanes (except the C-46 type), and nontransport category airplanes certificated after December 31, 1964, unless approved airborne weather radar equipment has been installed in the airplane.	§ 121.357

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ITEM	FLIGHT DECK	REFERENCES (current editions)
7	**Low-Altitude Wind Shear System.** **a.** Except for turbopropeller-powered airplanes, all turbine-powered airplanes manufactured after January 2, 1991, must be equipped with either an approved airborne wind shear warning and flight guidance system, an approved airborne detection and avoidance system, or an approved combination of these systems. **b.** The following aircraft must be equipped with either an approved airborne wind shear warning and flight guidance system, an approved airborne detection and avoidance system, or an approved combination of these systems: A-300-600; A-310; A-320; B-737-300, 400, and 500; B-747-400; B-757; B-767; F-100; MD-11; MD-80 series equipped with an Electronic Flight Information System (EFIS); and Honeywell-970 digital flight guidance computer. **c.** All other turbine-powered airplanes must be equipped with at least an approved airborne wind shear warning system. These airplanes may be equipped with an approved airborne wind shear detection and avoidance system or an approved combination of these systems.	§ 121.358 AC 25-12, Airworthiness Criteria for the Approval of Airborne Windshear Warning Systems in Transport Category Airplanes TSO-C117a, Airborne Windshear Warning and Escape Guidance Systems for Transport Airplanes
8	**Radio Altimeter.** Verify that the installation meets the requirements of the Airplane Flight Manual (AFM) and approved Category II (CAT II) Approach/Category III (CAT III) Approach program(s), as applicable.	AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach
9	**Global Positioning System (GPS).** Verify that installations meet appropriate system descriptions, operational procedures, and limitations in the AFM/Airplane Operations Manual (AOM), as applicable. Also verify that the software version meets the AFM/AOM and certificate holder's requirements. Ensure the aircraft conforms to the appropriate approved documents.	AC 20-138, Airworthiness Approval of Positioning and Navigation Systems

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ITEM	FLIGHT DECK	REFERENCES (current editions)
10	**Terrain Awareness and Warning System (TAWS).** **a.** Verify that all turbine-powered airplanes manufactured after March 29, 2002, are equipped with an FAA-approved TAWS. The installation must also include an approved terrain situational awareness (SA) display. All turbine-powered airplanes manufactured on or before March 29, 2002, must be equipped as described above by March 29, 2005. **b.** Verify the installation of proper operational and terrain database software versions, and that the AFM/AOM contains appropriate procedures for use of the system and proper flightcrew reaction in response to the system's audio and visual warnings.	§ 121.354 TSO-C151c, Terrain Awareness and Warning System (TAWS)
11	**Instrument Arrangement, Visibility, and Markings.** **a.** Verify the arrangement and visibility of flight and navigation instruments in accordance with the applicable regulations. **b.** Verify that displayed information and ranges are appropriate to the aircraft and the installed equipment. **c.** Verify that when markings are on the cover glass of the instrument, there is a means to maintain the correct alignment of the glass cover with the face of the dial. **d.** Verify appropriate powerplant instrument markings.	§ 91.205 § 121.305
12	**Electronic Flight Information Systems (EFIS) and Electronic Centralized Aircraft Monitoring (ECAM).** Verify display/pictures in the book match the aircraft's AFM/AOM and current software configuration/revision date.	AC 25-11, Electronic Flight Displays
13	**Instrument Requirements.** **a. Airspeed Indicating System.** Verify the installation of an approved instrument at each pilot station that is calibrated in knots, and that each airspeed limitation and item of related information in the AFM and pertinent placards are expressed in knots. The system must include a heated pitot tube or equivalent means for preventing malfunctioning due to icing, and must meet all pertinent airworthiness standards. **b. Sensitive Altimeter.** Verify installation of an approved instrument at each pilot station. The instruments must be adjustable for barometric pressure.	§§ 91.205, 91.217, and 91.219 §§ 121.303, 121.305, 121.313, 121.323, and 121.325

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ITEM	FLIGHT DECK	REFERENCES (current editions)
	c. Sweep-Second Hand Clock. Verify the installation of an approved clock displaying hours, minutes, and seconds with a sweep-second pointer, digital presentation, or approved equivalent. **d. Standby Horizon Additional Attitude Instrument.** Verify that, if required by § 121.305(j), an additional approved third such instrument is installed in accordance with § 121.305(k). **e. Gyroscopic Bank and Pitch Indicator (Artificial Horizon, Attitude Indicator, etc.).** Verify the installation of an approved instrument at each pilot station. **f. Free Air Temperature Indicator.** Verify the installation of an approved free air temperature indicator or an air temperature indicator that provides indications that are convertible to free air temperature. **g. Gyroscopic Rate-of-Turn Indicator.** Verify that the installation of an approved instrument at each pilot station is combined with an integral slip/skid indicator (turn and bank indicator), except that only slip/skid indicators are required when a third attitude instrument system is installed in accordance with § 121.305(k). **h. Gyroscopic Direction Indicator.** Verify the installation of an approved directional gyro, or equivalent, at each pilot station. **i. Vertical Speed (Rate of Climb) Indicator.** Verify the installation of approved instruments at each pilot station. **j. Magnetic Compass.** Verify the installation meets the approved TSO or other approved installation documents (refer to § 91.205 and 14 CFR part 23, § 23.2610).	
14	**Speed Warning Device.** Verify installation of an aural speed warning device on turbine engine-powered airplanes, and airplanes with a maximum operating limit speed (VMO/MMO) greater than 0.8 demonstrated flight diving speed (VDF/MDF) or 0.8 VDF/MDF. The speed warning device must give effective aural warning (differing distinctively from aural warnings used for other purposes) to the pilots, whenever the speed exceeds VMO plus 6 knots or MMO plus 0.01. The upper limit of the production tolerance for the warning device may not exceed the prescribed warning speed.	§ 91.603

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ITEM	FLIGHT DECK	REFERENCES (current editions)
15	**Automatic Pilot System.** Verify that indicators and controls meet applicable airworthiness standards, including the requirement that quick release (emergency) controls must be on both control wheels, on the side of each wheel opposite the throttles. Verify that the AFM (and certificate holder's AOM, if applicable) show minimum altitude for use of autopilot. NOTE: If the certificate holder is authorized for CAT II or CAT III operations, the aircraft autopilot can be used for lower altitudes when approved by OpSpecs.	§ 121.579
16	**Instrument Lighting.** Verify that instrument lights provide enough light to make each required instrument, switch, or similar instrument easily readable and installed so that the direct rays are shielded from flightcrew members' eyes and that no objectionable reflections are visible to them. There must be a means of controlling the intensity of illumination unless it is shown that non-dimming instrument lights are satisfactory.	§§ 121.323(d) and 121.325(c)
17	**Pitot Heat Indication Systems.** Verify that the indication system incorporates an amber light that is in clear view of a flightcrew and that is designed to alert the flightcrew if the pitot heating system is switched off, or the pitot heating system is switched on, and any pitot tube heating element is inoperative.	§ 121.342
18	**Required Powerplant Instruments.** Verify the installation of approved instruments as listed below: **a.** Fuel pressure indicator for each engine and either an independent fuel pressure warning device for each engine, or a master warning device for all engines with a means for isolating the individual warning circuits from the master warning device. **b.** Fuel flow indicator for each engine not equipped with an automatic altitude mixture control. **c.** Fuel quantity indicator for each fuel tank to be used. **d.** Oil pressure indicator for each engine. **e.** Oil quantity indicator for each oil tank. NOTE: Indicator may not always be located on the flight deck. **f.** Oil temperature indicator for each engine. **g.** Oil pressure warning means for each engine.	§ 91.205 § 121.307

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ITEM	FLIGHT DECK	REFERENCES (current editions)
	h. Tachometer for each engine. For turbine engine-powered aircraft, the indicators must display speed rotors (i.e., N1, N2, or N3) that have established limiting speeds. **i.** Augmentation liquid quantity indicator for each tank (if applicable). **j.** An approved means to ensure prompt detection of a fire in designated fire zones (engine or auxiliary power unit (APU) compartments for parts 23 and 25 aircraft). There must also be a means to allow the crew to check, in-flight, the functioning of each fire detector electric circuit. **k.** Reverse pitch indication for each reversible propeller (if applicable). **l.** Gas temperature (e.g., exhaust gas temperature (EGT)) indicator for each turbine engine (if applicable). **m.** Engine starter indication for each turbine engine-powered part 25 aircraft (if applicable). **n.** Ice protection system indication for each turbine engine (if applicable). **o.** Fuel filter bypass indication for each turbine engine (if applicable). **p.** Oil strainer or filter warning indication for each turbine engine (if no bypass is installed) to warn the flightcrew of the occurrence of contamination of the strainer or filter before it reaches maximum capacity (if applicable). **q**. A means to indicate proper functioning of any heater(s) used to prevent ice clogging of fuel system components. **r.** Thrust (or directly-related (e.g., N1)) indicator for each turbojet or turbofan engine (if applicable). **s.** Thrust reversing indicator for each engine using a thrust-reversing device, to indicate to the flightcrew when the thrust-reversing device is in the reverse thrust position (if applicable). **t.** Rotor system unbalance indicator for part 25 turbojet-powered aircraft (if applicable). **u.** Torque indication for each turbine propeller-powered aircraft engine (if applicable). **v.** Propeller position indication for each propeller of turbopropeller-powered aircraft (if applicable). For airplanes equipped with fluid systems (other than fuel) for thrust or power augmentation, an approved means must be provided to indicate to the flightcrew the proper functioning of that system (if applicable).	

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ITEM	FLIGHT DECK	REFERENCES (current editions)
	w. For part 23 turbine-engine-powered aircraft, a fuel low level warning means for any fuel tank that should not be depleted of fuel in normal operations (if applicable). **x.** Carburetor air temperature indicator. **y.** For air-cooled engines, a cylinder head temperature indicator for each engine.	
19	**Takeoff Warning System.** Verify the installation of a takeoff warning system.	Part 25, § 25.703 § 121.293
20	**Landing Gear Aural Warning Device.** The following is excerpted from § 121.289(a)(1) and (2): "(a) Except for airplanes that comply with the requirements of § 25.729 of this chapter on or after January 6, 1992, each airplane must have a landing gear aural warning device that functions continuously under the following conditions: (1) For airplanes with an established approach wing-flap position, whenever the wing flaps are extended beyond the maximum certificated approach climb configuration position in the Airplane Flight Manual and the landing gear is not fully extended and locked. (2) For airplanes without an established approach climb wing-flap position, whenever the wing flaps are extended beyond the position at which landing gear extension is normally performed and the landing gear is not fully extended and locked."	§ 121.289
21	**Flight Deck Inspection.** Inspect the flight deck for cleanliness, poor condition, loose/missing equipment, deterioration, breakage, leakage, corrosion, proper installation, and other indications of defects. Pay particular attention to windshields, windows, paneling, flooring, controls, lighting, and wiring installations.	§ 121.153
22	**Flight Deck Interiors/Fire Resistance.** Examine seat dress cover assemblies for meeting the flammability requirements of § 25.853(a). Review documentation of flame testing (AC 25.853-1, Flammability Requirements for Aircraft Seat Cushions).	§§ 121.215 and 121.312

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ITEM	FLIGHT DECK	REFERENCES (current editions)
23	**Flightcrew Emergency Exits.** For airplanes in which the proximity of passenger emergency exits to the flightcrew area does not offer a convenient and readily accessible means of evacuation for the flightcrew, and for all airplanes having a passenger seating capacity greater than 20: **a.** Verify that flightcrew exits are located in the flightcrew area. **b.** Verify that such exits are of sufficient size and are located to permit rapid evacuation by the crew. One exit must be provided on each side of the airplane, or a top hatch may be provided. Each exit must encompass an unobstructed rectangular opening of at least 19 by 20 inches, unless satisfactory exit utility can be demonstrated by a typical crewmember.	§ 25.807 § 121.221
24	**Emergency Equipment.** Verify that each item of emergency and flotation equipment meet the following requirements: **a.** Be inspected regularly in accordance with inspection periods established in the OpSpecs to ensure its condition for continued serviceability and immediate readiness to perform its intended duty. **b.** Be readily accessible to the crew. **c.** Be clearly identified and marked to indicate its method of operation. **d.** When carried in a compartment or container, be carried in a compartment or container marked as to contents. The compartment or container, or the item itself, must be marked as to date of last inspection.	§§ 121.221 and 121.309
25	**Medical Kit (If Located on Flight Deck).** See the requirements of Table 10-9-1F, Fuselage Interior, Item 22.	§ 121.803 Part 121 Appendix A
26	**Hand Fire Extinguishers for Flightcrew.** Verify that at least one hand fire extinguisher is conveniently located on the flight deck for use by the flightcrew. The type and quantity of extinguishing agent must be suitable for the kinds of fires likely to occur in the compartment where the extinguisher is intended to be used. Check for fire extinguisher security, pressure, hydrostatic test dates, and seal.	§ 121.309 Part 121 Appendix A AC 20-42, Hand Fire Extinguishers for Use in Aircraft

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ITEM	FLIGHT DECK	REFERENCES (current editions)
27	**Protective Breathing Equipment (PBE).** The following is excerpted from § 121.337(b)(1): "The equipment must protect the flightcrew from the effects of smoke, carbon dioxide or other harmful gases or an oxygen deficient environment caused by other than an airplane depressurization while on flight deck duty and must protect crewmembers from the above effects while combatting fires on board the airplane." The following is excerpted from § 121.337(b)(9)(i) and (ii): "(i) One PBE is required for each hand fire extinguisher located for use in a galley other than a galley located in a passenger, cargo, or crew compartment. "(ii) One on the flight deck, except that the Administrator may authorize another location for this PBE if special circumstances exist that make compliance impractical and the proposed deviation would provide an equivalent level of safety."	§ 121.337
28	**Oxygen Equipment and Supply.** **a.** Verify that the aircraft is equipped with oxygen equipment per §§ 25.1441 through 25.1453. **b.** Oxygen/fire extinguisher pressure vessel inspections must comply with Title 49 of the Code of Federal Regulations (49 CFR) part 180, § 180.205; Department of Transportation (DOT); or United States Coast Guard (USCG) requirements. **c.** Check all portable and fixed oxygen bottles and fire bottles for hydrostatic test dates.	§ 91.211 §§ 121.309, 121.329, 121.333, and 121.574
29	**Seats, Berths, Safety Belts, and Harnesses.** Verify that each seat at a flight deck station has a restraint system consisting of a combined safety belt and shoulder harness with a single-point release that permits the flight deck occupant, when seated with the restraint system fastened, to perform all of the necessary flight deck functions.	§ 91.521 § 121.311
30	**Approved Flight Deck Check Procedures Checklist.** Verify that approved procedures include each item necessary for flightcrew members to check for safety before starting engines, taking off, or landing, and in engine and systems emergencies.	§ 121.315
31	**Observer Seat.** Verify installation, security, and condition of flight deck observer seat and all required peripheral equipment.	§ 121.581

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ITEM	FLIGHT DECK	REFERENCES (current editions)
32	**Placards.** Verify that manufacturer-required placards are installed. Refer to chapter 11 of the Aircraft Maintenance Manual (AMM) for data. All placards required by either the approved AFM, the applicable operating rules, operators' placard manual, or the certification basis must be installed in the airplane. Refer to the Type Certificate Data Sheet (TCDS); Supplemental Type Certificates (STC); AC 20-88, Guidelines on the Marking of Aircraft Powerplant Instruments (Displays); and the AMM.	§ 121.310
33	**Windshield Wiper.** Verify installation or equivalent for each pilot station.	§ 121.313
34	**Pilot Compartment Doors.** Verify the following requirements for a lockable door that must be installed between the pilot compartment and the passenger compartment: **a.** The emergency exit configuration must be designed so that neither crewmembers nor passengers need to use that door to reach the emergency exits provided for them. **b.** Means must be provided to enable flightcrew members to directly enter the passenger compartment from the pilot compartment if the flight deck door becomes jammed. In any case where internal doors are equipped with louvers or other ventilating means, there must be a means convenient to the crew for closing the flow of air through the door when necessary. **c.** The following is an excerpt from § 121.313(f): "A door between the passenger and pilot compartments (i.e., flightdeck door), with a locking means to prevent passengers from opening it without the pilot's permission, except that nontransport category airplanes certificated after December 31, 1964, are not required to comply with this paragraph. For airplanes equipped with a crew rest area having separate entries from the flightdeck and the passenger compartment, a door with such a locking means must be provided between the crew rest area and the passenger compartment." **d.** The following is an excerpt from § 121.313(j)(1)(i): "Each such door must meet the requirements of § 25.795(a)(1) and (2) in effect on January 15, 2002."	§§ 121.217, 121.219, and 121.313

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ITEM	FLIGHT DECK	REFERENCES (current editions)
35	**Portable Electronic Devices (PED) and Electronic Flight Bags (EFB).** **a.** Verify that the certificate holder has properly determined that permitted PEDs and/or EFBs will not cause interference with the navigation and communication systems of the subject aircraft. **b.** Verify that the software version meets the AFM/AOM and certificate holder's requirements. Refer to AC 120-76, Authorization for Use of Electronic Flight Bags.	§ 121.306
36	**Protective Fuses.** If protective fuses are installed on the airplane, the certificate holder's manual must describe the number of spare fuses approved for that airplane.	§ 91.205 § 121.313 AC 25-16, Electrical Fault and Fire Prevention and Protection AC 25.1357-1, Circuit Protective Devices
37	**Crash Ax.** Each transport-category airplane must be equipped with a crash ax.	§ 121.309(e)

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Table 10-9-1H. Equipment and Cargo Compartments

ITEM	EQUIPMENT AND CARGO COMPARTMENTS	REFERENCES (current editions)
1	**General Visual Inspection (GVI).** **a.** Check electronic/electrical components, including wiring and connectors, for condition, proper bonding, and security. **b.** Check that wiring is properly grouped, bundled, routed, and secured to airframe structure. **c.** Check with the current aircraft equipment list for installed equipment. **d.** Check for metal shavings or other debris that can cause electrical shorts and fire. **e.** Check the exposed airframe structure (forward pressure bulkhead, if accessible) for general condition, corrosion inhibiting compound (CIC) application, and evidence of fluid leaks and damage. **f.** Check insulation blankets for condition and liquid saturation. **g.** If repairs are noted to the airframe structure (major repair), verify that the repair data is Federal Aviation Administration (FAA)-approved. **h.** Check that all placards required by the FAA-approved Airplane Flight Manual (AFM), aircraft Type Certificate Data Sheet (TCDS), and applicable operating rules are properly installed at the location specified by those documents. **i.** Check each compartment for general condition and that the flammability requirements of ceiling, sidewall liners, and floor material are met (no holes or tears and seams sealed with approved tape). **j.** Check all visible cables, wiring, hydraulic and fuel lines, and equipment for security and damage. **k.** Verify that the equipment and cargo compartments meet their type design per the TCDS and any changes that have a Supplemental Type Certificate (STC) approved by the FAA and the aircraft is in compliance with that data. **l.** Check that the digital flight data recorder (DFDR) and flight deck voice recorder are protected from any contact with shifting baggage or cargo (when applicable).	14 CFR part 43, § 43.13(c) 14 CFR part 121, §§ 121.221, 121.223, 121.312, 121.313, 121.314, and 121.369 Volume 6, Chapter 2, Section 4 Advisory Circular (AC) 43-206, Inspection, Prevention, Control, and Repair of Corrosion on Avionics Equipment

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ITEM	EQUIPMENT AND CARGO COMPARTMENTS	REFERENCES (current editions)
2	**Required Crew Emergency Exits.** **a.** Check that the crew has access to emergency exits under all cargo loading conditions. These emergency exits cannot be located within the "E" cargo compartment. **b.** Check for required placards and markings of the emergency exit(s). **c.** Check aircraft that have two flight deck windows that cannot be opened from the outside, the most forward left main (L1) fuselage door is designated as the required emergency exit. **d.** Depending on the type certificate (TC) or STC, marking and designation of the emergency exits will vary. Some aircraft have designated the flight deck windows as the emergency exit. **e.** On certain aircraft, an overhead hatch may be provided as an emergency exit. **f.** Check that the path from the flight deck to the designated emergency exit is free from obstacles and properly marked.	§§ 121.221 and 121.223 Volume 6, Chapter 2, Sections 4 and 5
3	**Baggage and Cargo Restraint System.** **a.** Perform the configuration evaluation check per the approved or accepted data of the Original Equipment Manufacturer (OEM) or STC holder. **b.** Check that the restraint system meets Technical Standard Order (TSO)-C90d, Cargo Pallets, Nets and Containers (Unit Load Devices), or other approved means as required. **c.** Check that the certificate holder has a maintenance program for its cargo system, including restraint system, pallets, nets, and unit load device (ULD). **d.** Check the existing aircraft baggage and cargo restraint system installation (restraint system, pallets, and nets) for general condition, security, and to verify if they are properly identified to its weight or load limits.	§§ 121.135, 121.221, 121.223, 121.285, and 121.367 Volume 6, Chapter 2, Sections 4 and 5 AC 25-18, Transport Category Airplanes Modified for Cargo Service AC 120-85, Air Cargo Operations TSO-C90d
4	**Major Alterations of Aircraft Modified to Cargo Freighters (Including Palletized Restraint Systems, Cargo Doors, etc.).** **a.** Check that the certificate holder's aircraft has been modified to a cargo freighter in accordance with an FAA-approved STC. **b.** When other than the STC holder's parts and components are used, verify compliance with approved data obtained from the certificate holder's records repository.	Volume 4, Chapter 9, Section 1 Volume 6, Chapter 2, Sections 5 and 36 AC 120-77, Maintenance and Alteration Data

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ITEM	EQUIPMENT AND CARGO COMPARTMENTS	REFERENCES (current editions)
5	**Upper Deck and Cargo Barrier.** Regardless whether the main cabin is used for cargo-only or as a combi, it must be equipped with a forward 9g barrier; either a solid bulkhead or net, in compliance with 14 CFR part 25, § 25.561, § 121.285, or Civil Aviation Regulation (CAR) 4b.269. **a.** Check the 9g cargo barrier (net or bulkhead) for general condition, fraying, hardware integrity and airframe attachment, and conformity with approved data. **b.** If the aircraft has been converted from a passenger configuration to a cargo-only or a combi through an STC, refer to AC 25-18 for details and verify the records for approved data. Perform the conformity review with this data. **c.** Check for the presence of an FAA Parts Manufacturer Approval (FAA-PMA) tag, and TSO tag, if applicable. **d.** Check all visible cables, wiring, hydraulic and fuel lines, and equipment for security and damage. **e.** Check that each lamp is adequately shielded to prevent contact between lamp bulb and baggage or cargo. **f.** Check that any heat source is adequately shielded and insulated to prevent igniting the baggage or cargo. **g.** Check for at least one approved, readily accessible hand-held fire extinguisher which must be available for use in each class A or B cargo or baggage compartment and in each class E or F cargo or baggage compartment that is accessible to crewmembers in flight (main deck cargo). **h.** Check that a separate approved smoke or fire detector system is installed to give warning to the pilot or Flight Engineer (FE) and is controllable from the flight deck. **i.** Check if the installed equipment is in compliance with the current aircraft equipment list, including STC requirements. **j.** Check the condition of the smoke curtain (if installed). If a smoke curtain was not installed, check the condition of the flight deck door seals. **k.** Check for livestock-carrying freighters for FAA-approved modification data. **l.** Check for a means to prevent cargo or baggage from interfering with the functioning of the fire extinguishing system of the compartment (i.e., a top loading limit marking per the manufacturer's or STC holder's requirement). **m.** Check the cargo door's seals for condition.	14 CFR part 21, § 21.31 §§ 25.851 and 25.857 §§ 121.221, 121.223, 121.285, 121.309, and 121.367 Volume 6, Chapter 2, Sections 4 and 5 AC 20-42, Hand Fire Extinguishers for Use in Aircraft AC 20-88, Guidelines on the Marking of Aircraft Powerplant Instruments (Displays) AC 20-168, Certification Guidance for Installation of Non-Essential, Non-Required Aircraft Cabin Systems & Equipment (CS&E) AC 25-16, Electrical Fault and Fire Prevention and Protection AC 25-18 TSO-C121, Underwater Locating Devices (Acoustic) (Self-Powered)

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ITEM	EQUIPMENT AND CARGO COMPARTMENTS	REFERENCES (current editions)
	n. Check the condition of the cargo bin or pallet loading system (if installed) such as rollers, tracks, pallet or bin clamps, or other securing devices for condition and operation. **o.** Check if the emergency exit is more than 6 feet off the ground and that a means is provided for the crew and extra supernumeraries (if so equipped) to descend to the ground (e.g., inflatable slide or slide raft, cargo, etc.).	

10-9-1-7 through 10-9-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 10 THE CERTIFICATE TRANSFER PROCESS

Section 1 Safety Assurance System: Certificate Transfer Process

10-10-1-1 GENERAL.

A. Purpose. This section provides procedures to transfer the oversight responsibility of an existing Title 14 of the Code of Federal Regulations (14 CFR) part 121, 135, or 145 certificate holder's operating certificate from one Flight Standards office to another. The Federal Aviation Administration (FAA) considers available resources and oversight requirements before transferring a certificate. If you are a participant in a certificate transfer, this section applies to you.

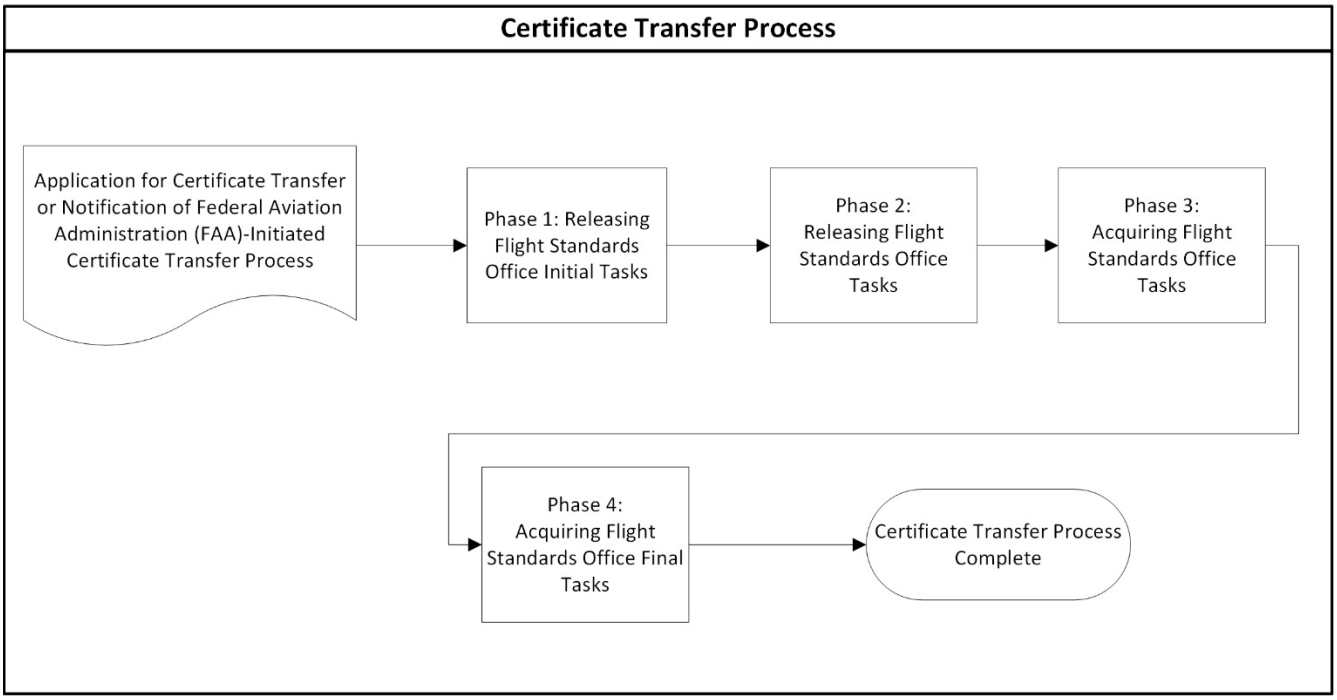
B. Scope. Participants in a certificate transfer must follow this process to complete a certificate transfer when the transfer is not the result of a merger or acquisition. For more information on mergers or acquisitions, see Volume 3, Chapter 34, Section 1.

10-10-1-3 RESERVED.

10-10-1-5 BACKGROUND. This section describes the process of a certificate transfer from one Flight Standards office to another.

10-10-1-7 CERTIFICATE TRANSFER PROCESS.

Figure 10-10-1A. Certificate Transfer Process Flowchart



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10-10-1-9 PROCEDURES.

A. How to Proceed If a Certificate Holder Requests a Transfer. A certificate holder requests a certificate transfer by submitting a written request to the Flight Standards office currently responsible for the certificate holder. The request must outline a plan and include the proposed timeframe and justification for the transfer. The Flight Standards office forwards a copy of the request and plan to the appropriate Flight Standards division.

B. How the FAA Initiates a Certificate Transfer. The FAA may decide to transfer a certificate because conditions indicate that better service and surveillance would occur if the certificate moves to another Flight Standards office. Budget and personnel considerations would also be factors in the decision to transfer.

1) National Level. The Office of the Executive Director, Flight Standards Service and/or division managers may identify conditions that indicate the FAA could provide better service and/or surveillance to a certificate holder if the certificate moved to another Flight Standards office. The Office of the Executive Director, Flight Standards Service notifies the appropriate division manager(s) and the Flight Standards Office Manager(s) (OM) of the certificate selected for transfer.

2) Office Level. The Flight Standards OM who is responsible for the oversight of a certificate holder may identify a certificate for transfer. The OM initiates the request for a transfer through the appropriate Flight Standards division.

C. Assistance from the National Program Office Branch. Contact the National Program Office Branch for assistance in the following areas:

- The Field Support Program Office (FSPO) supports adjustments to the Comprehensive Assessment Plan (CAP) and closing open assessments;
- The Certification and Evaluation Program Office (CEPO) supports the National Certificate Holder Evaluation Process (CHEP) for part 121 CHEPs; and
- The Continual Improvement Program Office (CIPO) supports questions about Safety Assurance System (SAS) policy, automation, and Data Collection Tools (DCT).

D. Phase 1—Releasing Flight Standards Office Initial Tasks. The releasing Flight Standards office is responsible for:

1) Coordinating with the Executive Director or Deputy Executive Director of the Flight Standards Service if the transfer significantly affects the FAA.

2) Reviewing the certificate holder's transfer plan.

3) Scheduling an initial briefing with the acquiring Flight Standards office to discuss the transfer details and identify when the transfer of oversight responsibility will occur.

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4) Contacting the National Program Office Branch for support during the transfer process, as necessary.

5) For part 121 certificate transfers, contacting the National Program Office Branch's CEPO to coordinate a date for a National CHEP evaluation if one has not been accomplished within the last 24 months, or as needed.

E. Phase 2—Releasing Flight Standards Office Tasks. The releasing Flight Standards office must remain fully staffed during the transfer. In general, the releasing Flight Standards office:

1) Addresses unresolved issues associated with the certificate holder.

2) Ensures principal inspectors (PI) evaluate all SAS risk indicators by completing the Certificate Holder Assessment Tool (CHAT) in accordance with Volume 10, Chapter 3, Section 1.

3) Reviews the certificate holder's Flight Standards office files and information in FAA databases. Include the files listed on the Flight Standards office's official files list applicable to the certificate holder (refer to FAA Order 1350.14, Records Management, for a complete list of files).

4) Coordinates with the acquiring Flight Standards office to:

- Transfer the Flight Standards office files;
- Hold a meeting with the certificate holder to review the certificate transfer process and certificate holder's transfer plan; and
- Transfer the certificate.

5) Completes and closes all of the open work assignments prior to the certificate transfer. Otherwise, the releasing Flight Standards OM must ensure that the open work assignments are unassigned or unresourced before transferring the certificate. The acquiring Flight Standards office then assigns or resources the SAS work assignments that were not previously completed.

6) Uses the CAP to document critical planned surveillance.

7) Meets with the acquiring Flight Standards office and discusses the SAS work program. Reviews the CHAT risk indicators, System or Subsystem Performance Assessments (SPA), Element Performance Assessments (EPA), Element Design Assessments (EDA), and the Analysis, Assessment, and Action (AAA).

8) Verifies requests are on file for authorizations, limitations, exemptions, and deviations, and that the information agrees with the information contained in the certificate holder's operations specifications (OpSpecs). Verifies that all authorizations and limitations in OpSpec A004, and extensions and deviations in OpSpec A005 of the certificate holder's OpSpecs, have the correct and current OpSpecs assigned.

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9) Reviews the certificate holder's current "vitals" for accuracy in SAS. Contacts the Aviation Data Branch (as necessary).

10) Completes enforcement actions, surveillance, or followup for:

- Outstanding hotline complaints;
- Congressional inquiries;
- Safety Issues Reporting System (SIRS) issues;
- Whistleblower complaints;
- Voluntary disclosures; and
- Incidents, occurrences, etc., as necessary.

11) Forwards the certificate holder's Flight Standards office files and the completed sections of the Certificate Transfer Process Job Aid (see Figure 10-10-1B) to the acquiring Flight Standards office. Forwards the files, along with other information maintained outside FAA computer databases, with the transfer documents.

F. Phase 3—Acquiring Flight Standards Office Tasks. The acquiring Flight Standards office:

1) Contacts the National Program Office Branch for support during the transfer process (as necessary).

2) Reviews the certificate transfer plan and Certificate Transfer Process Job Aid, and adjusts the plan (as necessary) in coordination with the releasing Flight Standards office.

3) Verifies the resolution of all open items and discrepancies.

4) Ensures Flight Standards office positions are staffed as necessary.

5) Completes training. For training requirements, refer to the SAS Resource Guide (SRG).

6) Updates the certificate holder's or applicant's team roster in SAS automation. Upon request, the National Program Office Branch can assist the Data Quality Reviewer (DQR) (or assigned Flight Standards office member) with populating the initial SAS tables for the new Flight Standards office.

7) Meets with the releasing Flight Standards office to discuss the SAS work program. Reviews the CHAT risk indicators and the AAA.

8) Reviews and/or revises the Certificate Holder Operating Profile (CHOP), CHAT, and CAP after becoming primarily responsible for oversight. Ensures there are adequate resources for the initial quarter after the acquiring Flight Standards office becomes responsible for the oversight of the certificate.

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9) Completes certificate management requirements that are independent of SAS to include:

a) Issuing a new certificate, if applicable;

b) Issuing applicable paragraphs in the Web-based Operations Safety System (WebOPSS);

c) Transferring "Open" and "Planned" Program Tracking and Reporting Subsystem (PTRS) records;

d) Updating Master Minimum Equipment List (MMEL) user data (see Volume 4, Chapter 4); and

e) Ensuring the enhanced Vital Information Database (eVID) is current.

10) Forwards a copy of the completed Certificate Transfer Process Job Aid, the certificate transfer plan, and related documents to the appropriate Flight Standards division.

11) Holds an introductory meeting with the certificate holder, the new Flight Standards OM, and the Flight Standards office.

G. Phase 4—Acquiring Flight Standards Office Final Tasks. The acquiring Flight Standards office:

1) Validates that the Certificate Transfer Process Job Aid (Figure 10-10-1B) is complete.

2) Ensures that administrative functions are complete, including:

a) Update to personnel actions, staffing, training, and assignments.

b) Transfer of all files from the releasing Flight Standards office to the acquiring Flight Standards office.

c) Entry of required PTRS records:

- Operations: 1245;
- Maintenance: 3240; and
- Avionics: 5240.

d) Update of eVID.

e) Issue of a new operating or Air Agency Certificate.

f) Revision and reissue of OpSpecs.

g) Verification of the accuracy of the SAS roster.

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3) Notifies national, divisional, and office-level Flight Standards personnel when the acquiring Flight Standards office is actively managing the certificate.

4) Completes the certificate transfer documentation and provides a copy of the certificate transfer record to the releasing and acquiring offices, including:

a) Transfer requests/notifications.

b) Records of meetings and/or briefings.

c) Discrepancies.

d) Discrepancy resolutions.

e) Confirmations of PI's training, including:

- Completed Certificate Transfer Process Job Aid;
- Completed certificate transfer plan; and
- Acquisition of the Flight Standards office's "N/A Report" from the Operations Research Analyst (ORA) and the CHAT/CAP report as of the official transfer date.

10-10-1-11 hrough 10-10-1-13 RESERVED.

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10-10-1-15 JOB AIDS.

Figure 10-10-1B. Certificate Transfer Process Job Aid

Job Aid Start Date:		**Certificate Holder:**
Phase 1—Releasing Flight Standards Office Initial Tasks		
Item	Initials/Date or N/A	Details
1		Coordinate with the Executive Director or Deputy Executive Director of the Flight Standards Service if the transfer will significantly affect Federal Aviation Administration (FAA) resources.
2		If the request is for transfer from a corporate official, enter: Name: Corporate Title: Reason for the Transfer: Proposed Location: Proposed Transfer Date:
3		Notify appropriate division management of the transfer request. Person Contacted: Phone Number: Office Address:
4		Initiate certificate transfer file.
5		Contact the acquiring Flight Standards Office Manager (OM). Person Contacted: Phone Number: Office Address: Identify a transition team and team lead (if appointed). Name:
6		Review certificate holder's transfer plan. Date the acquiring Flight Standards OM received the plan: Requested Timeframe for Completion of Transfer:
7		Schedule an initial briefing with the acquiring Flight Standards office and establish a corresponding FAA plan to support the releasing and the acquiring Flight Standards office. Releasing Flight Standards Office: Manager's Name and Phone: Office Address: Acquiring Flight Standards Office: Manager's Name and Phone: Point of Contact (POC):
8		Contact the National Program Office Branch for support during the certificate transfer process (as necessary). National Program Office Branch POC:

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9		If required, request a National Certificate Holder Evaluation Process (CHEP). Completion Date of National CHEP:
Notes:		
Phase 2—Releasing Flight Standards Office Tasks		
Item	Initials/Date or N/A	Details
1		Coordinate with the acquiring Flight Standards office on how unresolved issues with the certificate holder are resolved.
2		Ensure principal inspectors (PI) include all appropriate risk indicators in the Certificate Holder Assessment Tool (CHAT) for the certificate holder, including Performance History (PH), Operational Stability (OS), Environmental Criticality (EC), and Certificate Holder Dynamics.
3		Review the certificate holder's FAA Flight Standards office files.
4		Verify that the manuals in the certificate holder's manual system are present. Coordinate access of electronic manuals from the releasing Flight Standards office to the acquiring Flight Standards office. Typical manuals include, but are not limited to: 1) General Operations Manual (GOM), 2) General Maintenance Manual (GMM), 3) Training program manuals, 4) Minimum equipment lists (MEL), 5) Flight Attendant (F/A) Manual (Passenger or Cargo Passenger), and 6) Maintenance Reliability Program. Discard any outdated files in accordance with the office file guide. Do not discard any original certification documentation. List the certificate holder's manuals here:
5		Coordinate with the acquiring Flight Standards office to: 1) Transfer the certificate holder's Flight Standards office files, 2) Meet with the certificate holder, and 3) Transfer the certificate.
6		Verify that PIs complete and close open Safety Assurance System (SAS) work assignments.
7		Verify that Front Line Managers (FLM) unassign any planned System or Subsystem Performance Assessments (SPA), Element Design Assessments (EDA), Element Performance Assessments (EPA), and Custom Data Collection Tools (C DCT).
8		Verify that PIs utilize Comprehensive Assessment Plan (CAP) to document critical planned surveillance.

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9		Meet with the acquiring Flight Standards office and discuss the SAS work program. Review the CHAT risk indicators and the Analysis, Assessment, and Action (AAA).
10		Confirm that the information contained in the certificate holder's operations specifications (OpSpecs) agrees with requests on file.
11		Verify that all authorizations and limitations listed in OpSpec A004, and exemptions and deviations listed in OpSpec A005, have an associated Web-based Operations Safety System (WebOPSS) paragraph assigned. Ensure that all issued OpSpecs are based on current template revisions.
12		Review the certificate holder's current "vitals" for accuracy in SAS. If necessary, contact the Aviation Data Branch.
13		Complete enforcement actions and surveillance for outstanding hotline complaints, congressional inquiries, Safety Issues Reporting System (SIRS) issues, whistleblowers, voluntary disclosures, incidents, occurrences, etc.
14		Forward the certificate holder's Flight Standards office files and the completed sections of the Certificate Transfer Process Job Aid to the acquiring Flight Standards office. Forward the files and information maintained outside FAA databases, along with the transfer documents.
15		Coordinate with the acquiring Flight Standards office for transfer of signature authority in WebOPSS (coordinate with the National Service Desk).
16		Coordinate with the acquiring Flight Standards office to complete transfer of certificate.
Notes:		
Phase 3—Acquiring Flight Standards Office Tasks		
Item	Initials/Date or N/A	Details
1		Contact the National Program Office Branch for support during the transfer process (as necessary).
2		Review the certificate transfer plan and Certificate Transfer Process Job Aid and adjust (as necessary) in coordination with the releasing Flight Standards office.
3		Verify that all open items and/or discrepancies were resolved.
4		Fill required Flight Standards office positions for the certificate being acquired.
5		Complete required training.
6		Update the certificate holder's or applicant's team roster in SAS.

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7		Meet with the releasing Flight Standards office and discuss the SAS work program. Review the CHAT risk indicators and the AAA.
8		Review and revise the Certificate Holder Operating Profile (CHOP), CHAT, and CAP, and amend as appropriate (ensure adequate resources for the initial quarter).
9		Issue a new certificate holder certificate.
10		Transfer the new certificate in WebOPSS.
11		Verify that the enhanced Vital Information Database (eVID) has been updated (refer to the Vital Information Subsystem Procedures Manual (VPM)).
12		Verify that all “Open” and “Planned” Program Tracking and Reporting Subsystem (PTRS) records are transferred.
13		Review all applicable OpSpecs.
14		Update Master Minimum Equipment List (MMEL) user data.
15		Forward a copy of completed Certificate Transfer Process Job Aid, certificate transfer plan, and related documents to the appropriate Flight Standards division.
16		Hold an introductory meeting with the certificate holder, the new Flight Standards OM, and office personnel.
Notes:		
Phase 4—Acquiring Flight Standards Office Final Tasks		
Item	Initials/Date or N/A	Details
1		Validate that all items on the Certificate Transfer Process Job Aid are complete.
2		Ensure administrative functions are completed including: ☐ Personnel action, staffing, training, and assignments are complete. ☐ Transfer of files from the releasing to the acquiring Flight Standards office. ☐ Entry of required PTRS records. ☐ Update the eVID (refer to the VPM). ☐ Issue new operating certificate. ☐ Revise and reissue OpSpecs. ☐ Revise office roster in the SAS automation. ☐ Reviewed and revised the CAP, as appropriate.
3		Notify appropriate Flight Standards division personnel.

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4		Complete certificate transfer documentation and provide a copy of the certificate transfer record to releasing and acquiring offices to include copies of the following: ☐ Transfer Request/Notification. ☐ Record (the releasing Flight Standards office being briefed on the transfer). ☐ Record (the acquiring Flight Standards office being briefed on the transfer). ☐ Discrepancies. ☐ Discrepancy resolution. ☐ Acquiring Flight Standards office PI's SAS training completion. ☐ Completed Certificate Transfer Process Job Aid. ☐ Completed Certificate Transfer Process. ☐ Acquiring Flight Standards office's "N/A Report" from the Operations Research Analyst (ORA) and the CHAT/CAP report as of the official transfer date.
Notes:		

10-10-1-17 through 10-10-1-29 RESERVED.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 11 MAJOR CHANGES IN OPERATIONAL AUTHORITY

Section 1 Safety Assurance System: Major Changes Process Document—General Information

10-11-1-1 GENERAL. This section outlines the process for managing a certificate holder's change of operations that requires validation tests and/or proving tests. When a certificate holder adds a new make and model (M/M) of aircraft, the Safety Analysis and Promotion Division's participation/assistance is optional.

A. Purpose. This chapter provides detailed guidance for a certificate-holder-requested change of operations that requires validation tests and/or proving tests to a certificate holder operating under Title 14 of the Code of Federal Regulations (14 CFR) part 121. See Volume 3, Chapter 29 for information on when to use this process (e.g., additional authority under the same part, or to include adding a new M/M of aircraft). If you are a participant in a major change in operational authority, this section applies to you.

B. Scope. The Flight Standards office certification project manager (CPM) is the point of contact (POC); he or she works closely with the principal inspectors (PI) to ensure continuity between the certificate holder and the change in operational authority. Participants in a major change in operational authority must refer to this process to determine if a certificate holder meets the requirements of the change in operational authority.

10-11-1-3 RESERVED.

10-11-1-5 BACKGROUND. This section provides participants in a major change in operational authority information about the process the Federal Aviation Administration (FAA) uses when we receive a request for a change to a certificate holder's operation.

A. Initial Inquiries or Requests. When a Flight Standards office receives a request for a change to a certificate holder's operation, the Flight Standards Office Manager (OM) first determines if the change requires validation and/or proving tests. If the project involves validation and/or proving tests, the Flight Standards office must see the Major Change Process Document (MCPD) in Volume 10, Chapter 11, Section 2. During this process, the Flight Standards office forms a Certification Project Team (CPT).

B. Safety Analysis and Promotion Division Notification. The FAA recommends notification/involvement of the National Program Office Branch's Certification and Evaluation Program Office (CEPO), which may participate in adding a new M/M aircraft. The National Program Office Branch's participation/assistance is optional when adding a new M/M aircraft. To request National Program Office Branch participation, the Flight Standards OM notifies the Safety Analysis and Promotion Division via email at AFS-900-Management-Team@faa.gov. This notification must include the following minimum information:

- The name of the certificate holder,
- The location of the certificate holder's principal base of operations,

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- The kind of operational change,
- The airplane type, and
- The proposed date for implementation.

C. MCPD.

1) Background. The MCPD provides work instructions for the process and is useful to the CPT and certificate holder. The MCPD replaces Notice N 8900.23, New Aircraft Process Document, which expired on October 1, 2008.

2) Process. This process should be limited to the size and scope of the requested change. Responsibility of an MCPD project remains at the Flight Standards office level. The Flight Standards office CPM is the POC and works closely with the PIs to ensure continuity between the existing certificate and the proposed change. Under no circumstances must any project activity compromise the safety posture of existing certificate management functions. This document identifies the person responsible for each action in the process. Every project is unique. The MCPD has five phases, which separate this process into related activities supporting specific functions. Each phase has a set of requirements that the participants must complete before beginning the next phase. Participants may accomplish steps within each phase concurrently.

NOTE: MCPD tasks for a Safety Analysis and Promotion Division Certification Team Leader (CTL) are required only when the process includes the Safety Analysis and Promotion Division at the request of the Flight Standards OM.

3) Phase 1—Initial Inquiry. The operator initiates the application process by providing a request for a change of operation to the Flight Standards office. The Flight Standards office then briefs the operator in the MCPD process. The operator's request must be in the form of a letter, which must include supporting documents, as listed in Figure 10-11-1A, Required Document List (RDL).

4) Phase 2—Application. The CPT reviews the operator's submissions for completeness and accuracy. This phase may provide for planning and coordination with the Safety Analysis and Promotion Division, as applicable. Phase 2 ends when the CPT accepts the application.

NOTE: In Phase 2, the CPM may modify the MCPD by changing, adding, or deleting steps, as necessary, to suit the individual project. A consensus of the PIs determines acceptance of all changes to the process document. Do not modify steps related to 14 CFR regulations and FAA orders.

5) Phase 3—Element Design Assessment (EDA). The CPT evaluates the revised system design using Element Design Data Collection Tools (ED DCT) to assure compliance with regulations and safety standards, including the obligation to provide service at the highest level of safety in the public interest. This phase uses Safety Assurance System (SAS) Data Collection Tools (DCT) to collect data that FAA aviation safety inspectors (ASI) use to determine if the certificate holder's system design meets all regulatory requirements. Phase 3 does not require

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the operation of an aircraft. Phase 3 ends when the assigned PI accepts or approves all revised manuals.

6) Phase 4—Element Performance Assessment (EPA). The CPT evaluates the performance using Element Performance Data Collection Tools (EP DCT) to determine if the applicant's revised systems are performing as intended and producing the desired results. This phase requires the operation of an aircraft to aid in the assessment of the applicant's system design. Phase 4 ends after the successful completion of the validation and/or proving tests.

7) Phase 5—Administrative Functions. This phase provides for completion of all administrative functions (e.g., approval or acceptance of revised system documentation and issuance of operations specifications (OpSpecs)).

10-11-1-7 through 10-11-1-13 RESERVED.

10-11-1-15 JOB AIDS.

Figure 10-11-1A. Required Document List (RDL)

Event Description	**Verified By**	**Date**
Certificate Holder Name		
Review Major Change Process Document (MCPD)		
Documentation Required at Initial Application Meeting		
Document/Manual	**Verified By**	**Date**
Application Letter—Request for amendment to its operations specifications (OpSpecs). Must meet requirements of Title 14 of the Code of Federal Regulations (14 CFR) part 119, § 119.51.		
Application Meeting		
Office of the Secretary of Transportation (OST) economic authority (if required).		
List of proposed OpSpecs paragraphs.		
Deviation and/or exemption requests.		
Schedule of Events (SOE).[1]		
Element Design Data Collection Tools (ED DCT) self-audit (as applicable).[5]		
Compliance statement (14 CFR part 121, § 121.135(b)(3)).		
Company manuals and programs.[2, 7]		

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Initial Cadre Check Airman (ICCA) training plan.		
Outsourcing contractual agreements.[6]		
Aircraft lease agreement or proof of ownership.[3]		
Aircraft document request list (see the Aircraft Configuration Control Document (ACCD) in Volume 10, Chapter 9, Section 1).		
Facility agreements (as required).		
Aircraft information form (see the ACCD).		
Aircraft Interior Configuration Document (AICD).[4]		
Status of security program (as applicable).		
Environmental Assessment (EA) information (as applicable).		
Status of hazardous materials (hazmat) procedures manual and training program (as applicable).		

Required Document List (RDL) Instructions

1. Indicate in the application letter whether the RDL and SOE are original or if they contain updates.

2. Submit all manuals/programs necessary to conduct daily operations. This includes user manuals for computer software programs, engineering and program substantiation documents that support or justify the manual system, or a program design to include user manuals for dispatch programs and flight planning programs (e.g., Weight and Balance (W&B) programs, aircraft modifications, or aircraft manufacturer's maintenance, flight, operating, and performance manuals).

NOTE: Ensure there is a method to separate real-time (current) manuals from project manuals.

3. Include as part of the formal application letter each lease agreement, Letter of Intent (LOI), or proof of ownership of an aircraft for the principal inspector (PI) to enter into the OpSpecs. (A lease agreement or proof of ownership of an aircraft is a Phase 2 requirement.)

4. Include an engineering diagram of the aircraft cabin interior (AICD) that includes, but is not limited to, locations of passenger and flight attendant (F/A) seats, emergency equipment, exits, lavatories, and galleys. An AICD may not be required if applying for an all-cargo operation. Documentation must be available for aircraft converted to all-cargo Supplemental Type Certificate (STC).

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5. Submit completed self-audited ED DCTs, if applicable, to the intended operation. All questions must be answered “Yes,” “No,” or “N/A.” Provide explanations for “No” and “N/A” responses. For every “Yes” response, provide reference to the manual(s), volume number(s), chapter number(s), and paragraph(s) in the company manual system or location where the relevant information is located. Provide manual references in the “References” section of the ED DCT.

NOTE: The completed ED DCT version must be current within 90 calendar-days of the first submission.

6. Include in the application package all new contractual agreements for outsourcing (maintenance, training, operations, etc.).

7. Include all manuals and programs required by part 121 as part of the application meeting package. Identify each manual and program submitted by using the same naming or numbering convention used to develop the manual and program.

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VOLUME 10 SAFETY ASSURANCE SYSTEM POLICY AND PROCEDURES

CHAPTER 11 MAJOR CHANGES IN OPERATIONAL AUTHORITY

Section2 Safety Assurance System: Major Change Process Document—Work Instructions

10-11-2-1 GENERAL.

A. Purpose. This section contains work instructions for the Major Change Process Document (MCPD). See Volume 10, Chapter 11, Section 1 for general information. See Volume 3, Chapter 34, Section 2 for information on what would be considered a major change of authority. The work instructions in this section provide reference material, briefing guides, meeting agendas, training requirements, and procedures material. If you are a participant in a major change in operational authority, this section applies to you.

B. Scope. The Flight Standards office assigns a certification project manager (CPM); he or she works closely with the principal inspectors (PI) to ensure continuity between the certificate holder and the change in operational authority. Participants in a major change in operational authority must refer to this process to determine if a certificate holder meets the requirements of the change in operational authority.

10-11-2-3 RESERVED.

10-11-2-5 BACKGROUND. Figure 10-11-2A, MCPD Work Instructions, consists of five phases and work instructions that identify the person responsible for each step in the process. Participants in a major change of operational authority may accomplish steps within each phase concurrently. Figure 10-11-2B, Schedule of Events, provides an example of a Schedule of Events (SOE) that the certificate holder will submit along with the required document list (RDL). Figure 10-11-2C, Major Change Process Tracking Report, is the report that the CPM uses to track step and phase completion.

Figure 10-11-2A. MCPD Work Instructions

PHASE 1—INITIAL INQUIRY.

1.1 Certificate Holder—Initiate a request for a major change in operating authority.

1.2 Flight Standards Office—Brief the certificate holder of the required forms and documents to initiate the change. Recommend that the certificate holder conduct a self-audit of the changed operating authority using the appropriate system, subsystem, or element. The certificate holder will submit this data to the Certification Project Team (CPT).

NOTE: Inform the certificate holder that conducting a self-audit will reduce the time needed for us (the Federal Aviation Administration (FAA)) to affirm the Element Design Assessment (EDA).

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1.2.1 Flight Standards Office—Develop a briefing agenda that focuses on the MCPD process to include the items below (refer to the RDL):

- Aircraft Information Form located in Volume 10, Chapter 9, Section 1.
- Compliance Document List.
- Certificate holder's revised manual and programs.
- Proposed operations specifications (OpSpecs).
- Exemption and deviation requests.
- Outsourcing (contractual arrangements).
- Training curriculum to include initial cadre training.
- Lease agreement or proof of ownership of aircraft (include aircraft registration and serial number(s)).
- SOE (see Figure 10-11-2B).
- Training plan for dispatchers.
- Data Collection Tools (DCT). Identify the elements that the change will affect.
- Element Design Data Collection Tools (ED DCT).
- Environmental Assessment (EA) requirements located in Volume 11, Chapter 6, Section 3.
- If adding an aircraft, suggest the certificate holder conduct the aircraft conformity evaluation prior to our validation of the conformity in Phase 4. Use the Aircraft Configuration Control Document (ACCD).

1.3 Phase 1 Review.

1.3.1 Flight Standards Office—Verify the completion of all steps in Phase 1 before proceeding to Phase 2.

PHASE 2—APPLICATION.

2.1 Certificate Holder Submits Request.

2.1.1 Flight Standards Office—Receive the certificate holder's application to amend its OpSpecs, per Title 14 of the Code of Federation Regulations (14 CFR) part 119, § 119.51(c), by submitting a letter of request to the Flight Standards office at least 90 days prior to the date of proposed change.

2.1.2 PI(s)—Review the request to verify that sufficient information is provided to support the requirements of § 119.51 and that the proposed operation is consistent with 14 CFR parts 119 and 121. The information must be complete and detailed enough to permit a thorough evaluation.

2.1.3 PI(s)—Identify the Labor Distribution and Reporting (LDR) project code (e.g., Project: 12XXFAFAR121; Task: CM0010).

2.1.4 PI(s)—Ensure that the appropriate Program Tracking and Reporting Subsystem (PTRS) codes are opened, as applicable.

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2.2 Establish Certification Team.

2.2.1 Flight Standards Office Manager (OM)—Notify the appropriate Flight Standards division manager if additional MCPD project team resources are required (e.g., dispatcher or geographical support).

2.2.2 Flight Standards OM—Select a CPM for the project.

2.2.3 Flight Standards OM—If the Certification and Evaluation Program Office (CEPO) is assisting in the addition of a new make and model of aircraft (M/M), provide a copy of the submitted documents to the CEPO manager at AFS-900-Management-Team@faa.gov.

2.2.4 Certification and Evaluation Program Office (CEPO) Manager (National Program Office Branch)—If requested, the CEPO manager will assign a Certification Team Leader (CTL) and a certification team to assist with the project.

2.2.5 CTL—Create a new project in the CEPO SharePoint website.

2.2.6 Flight Standards OM/CPM/CTL—Identify CPT members.

2.2.7 CPM—Initiate MCPD Tracking Report. (See Figure 10-11-2C).

2.3 Review Submissions.

2.3.1 CPT—Review the certificate holder's submission for the RDL. The proposal should be clearly identified and the documentation specified in Phase 1 provided.

2.3.2 CPT—Discuss the review of the submission and determine acceptance or rejection.

2.3.3 CPM—If the current submission is acceptable, provide a letter to the certificate holder.

2.3.4 CPM/CTL—If the current submission is not acceptable, notify the certificate holder with a written explanation of concerns. Advise the certificate holder that the next revision must be an entire submission. Every document in the submission is labeled in sequential order (e.g., Rev. B, Rev. C).

2.3.5 CPM/CTL—Modify steps of the MCPD project by adding or deleting steps to suit the individual project.

2.3.6 CPM/CTL—Provide the MCPD to the certificate holder.

2.4 EDA Planning.

2.4.1 CPM/CTL—Conduct a meeting with members of CPT to review the MCPD process.

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2.4.2 CPT—Identify system/elements located in Volume 10, Chapter 1, Section 2 that the change will affect.

2.4.3 CPM/CTL—Provide air-carrier-specific familiarization briefing to members of the CPT.

2.4.4 CPM/CTL—Ensure the certificate holder/applicant team roster lists all CPT members.

2.4.5 CPM/CTL—Contact the Office of the Secretary of Transportation (OST), Office of Aviation Analysis, Air Carrier Fitness Division at 202-366-9721 to confirm that the OST authorizes the certificate holder to conduct the proposed operation.

2.5 Phase 2 Review.

2.5.1 CPM/CTL—Verify the completion of all steps in Phase 2 before proceeding to Phase 3.

PHASE 3—ELEMENT DESIGN ASSESSMENT (EDA).

3.1 Planning Meeting—Modules 1 and 2.

3.1.1 PI(s)—Revise the Certificate Holder Operating Profile (CHOP) by selecting the applicable elements based on the requested scope of operation.

3.1.2 PI(s)—Modify the Certificate Holder Assessment Tool (CHAT) and populate it with identified risks.

3.1.3 PI(s)—Update the Comprehensive Assessment Plan (CAP). Ensure work instructions for EDA and Custom Data Collection Tools (C DCT) include at least the name of the team coordinator (TC), team member, and any other work instructions needed.

3.1.4 PI(s)—Identify the design elements that relate to approved manuals or programs, or to OpSpecs changes. Use Volume 10, Chapter 1, Section 2 to include elements that have been identified as high priority in the CAP.

NOTE: Teams assigned to DCTs that relate to approved manuals, programs, or to OpSpecs must include at least one aviation safety inspector (ASI) listed on the certificate holders/applicant's team roster. (The DCT TC will normally be the PI or ASI.)

NOTE: C DCT(s) may substitute for an ED DCT(s) to target specific element questions.

3.1.5 PI(s)—Adjust the EDA due dates for all elements revised or added as a result of the major change to the certificate holder's operation based on the SOE.

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3.2 Resource Management—Module 3.

3.2.1 CPM/CTL—Provide input to Frontline Managers (FLM) to help them identify team resources to complete the EDA.

3.2.2 FLMs—Determine resource availability and assign TCs and team members to support the EDA plan.

3.2.3 Flight Standards OM—Concur with the CAP.

3.3 Initial Cadre Training.

NOTE: Since all certificate holders must complete training before Phase 4 can begin, plan to complete EDAs in training elements first.

3.3.1 CPM/PI—Review the Initial Cadre Check Airman (ICCA) plan to verify compliance with procedures found in Volume 3, Chapter 20, Sections 2 and 6. Accomplish the elements for ICCA training. Accept all courseware.

3.3.2 PI—Notify the certificate holder in writing of the approval. Include in the letter that additional training may be required if deficiencies are found during the review process.

3.3.3 CPM/PI—Ensure the CAP is retargeted to assess the performance of the ICCA training.

3.4 Initial Training—Other.

3.4.1 CPT—Review other initial training to begin prior to the completion of Phase 3. Review the training program by using ED DCTs or C DCTs and related procedures. After the review, you must agree that all courseware and training materials are acceptable.

3.4.2 CPT—Review applicable procedures for:

3.4.2.1 Flightcrew member training located in Volume 3, Chapter 19.

3.4.2.2 Dispatcher training located in Volume 3, Chapter 22.

3.4.2.3 Flight attendant (F/A) training located in Volume 3, Chapter 23.

3.4.2.4 Maintenance personnel training located in Volume 3, Chapter 24.

3.4.3 CPM—Coordinate with the responsible PI to provide initial approval for the training program.

3.4.4 PI—Notify the certificate holder in writing of the approval. Include in the letter that additional training may be required if deficiencies are found during the review process.

3.4.5 CPM/PI—Ensure the CAP is retargeted to assess the performance of the training.

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3.5 Data Collection—Module 4.

3.5.1 CPT—Accomplish an EDA, and verify certificate holder self-audited ED DCT data.

3.5.2 CPT—Accomplish data collection by using Microsoft Word-formatted ED DCTs/C DCTs instead of the automation entries.

3.5.3 CPT—Complete the EDA sections using the work instructions provided by the PIs.

3.5.4 CPT—Collect and analyze data by conducting a data analysis meeting.

NOTE: If an ASI observes an issue not related to his or her element, submit an "other" Dynamic Observation Report (DOR), and notify the ASIs working that element.

3.5.5 CPM—If the certificate holder's self-audit ED DCT data lack quality and/or when additional data are needed, notify the certificate holder with a written explanation of concerns.

3.5.6 CPM—If a subsequent certificate holder's self-audit ED DCT data contain minimal concerns, then schedule and conduct a meeting with the CPT and certificate holder to discuss and correct the discrepancies.

NOTE: Minimal concerns do not prevent the acceptance or approval of a manual.

3.6 Data Reporting—Module 4.

3.6.1 CPT—Enter data into the automation once the certificate holder's self-audit of ED DCT data is of sufficient quality.

3.6.2 CPT—The self-audited ED DCTs can be attached to the DCT in the Data Reporting Module if the certificate holder is not using the external portal. If the certificate holder uses the external portal and the self-audited ED DCTs approved by the CPM in the Data Review Module, then the self-audited ED DCTs can be loaded into the DCT. The ASI selects the "View Prior Response" button to review the certificate holder's data and determine if they would like to use the data or not. If the certificate holder's data is applied to the DCT, the automation will not indicate this in the Analysis, Assessment, and Action (AAA).

3.6.3 CPT—If the ASI wants the certificate-holder-provided data in the first set of questions and the Certificate Management Team's (CMT) data in the second set of questions, reword this to indicate that the ASI would duplicate the question and provide their data in the second set of questions. When the DCT is complete, the ASI checks and submits the DCT.

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3.6.4 CPT—Ensure ED DCT, C DCT, and DOR data meet the data quality guidelines (DQG).

3.6.5 TC—Submit the ED DCT.

3.7 Data Reviewing—Module 4.

3.7.1 CPM/Data Quality Reviewer (DQR)—Ensure data meet DQGs.

3.7.2 CPM/DQR—Ensure data are saved to the automation.

3.8 AAA—Module 5.

3.8.1 CPM—Conduct an EDA meeting with members of the CPT.

3.8.2 CPM/PI—Make a bottom-line assessment for each element and document on the AAA tool.

3.9 Design AAA—Module 5.

3.9.1 PI(s)—Follow the Module 5 business process found in Volume 10, Chapter 6, Section 1, to determine the appropriate course of action for each element.

3.9.2 CPM—Approve or accept the entire certificate holder's system design without mitigation, then accept or approve manuals and programs, as applicable; or

3.9.3 CPM—Accept the certificate holder's system design with mitigation, accept or approve manuals and programs, then document the need for additional data collection, monitoring, or mitigation; or

3.9.4 CPM—Reject the certificate holder's system design, then notify the certificate holder in writing and repeat steps as necessary in Phase 3.

3.10 Check Status of the Following:

3.10.1 CPM—Environmental review.

3.10.2 CPM—Dangerous goods program.

3.10.3 CPM—Security program.

3.10.4 CPM—Check new requirements of economic authority.

NOTE: The Flight Standards OM may elect to review baseline staffing and baseline training requirements at this time.

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3.11 OpSpecs.

3.11.1 Certificate Holder and CPM—Verify that the proposed or revised OpSpecs are available in draft form.

3.12 Phase 3 Review.

3.12.1 Certificate Holder—Complete training for all Phase 4 participants.

3.12.2 CPM/CTL—Verify the completion of all steps in Phase 3 before proceeding to Phase 4.

PHASE 4—ELEMENT PERFORMANCE ASSESSMENT (EPA).

4.1 Confirm Operational Readiness.

4.1.1 Certificate Holder—Conduct an internal safety assessment of operating systems using company internal evaluation procedures and documentation. Submit results to the CPM.

4.1.2 Certificate Holder—Correct all concerns found during the internal evaluation.

4.2 EPA Planning—Module 2.

4.2.1 Certificate Holder—Submit an updated SOE.

4.2.2 CPM—Review and concur with the SOE.

4.2.3 PI(s)—Update the CHAT using information from the EDA.

4.2.4 PI(s)—Adjust the CAP and plan the EPA to observe during the demonstration phase. Include elements determined to be high priority/risk in the CAP.

NOTE: To prevent a large number of "not observed" answers, the PIs may use C DCT(s) in place of the EPA(s) to target specific element questions.

4.2.5 PI(s)—Adjust the EPA due dates for all elements revised or added, based on the SOE.

4.2.6 PI(s)—Ensure work instructions for assigned EPA(s) and C DCT(s) include at least the name of the team member and work instructions.

NOTE: Enter "MCPD, Rev. X" in the "Local/Regional/National" field box.

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4.3 Resource Management—Module 3.

4.3.1 CPM/CTL—Provide input to FLMs to help them identify team resources to complete the CAP.

4.3.2 Flight Standards Office and FLMs—Determine resource availability and assign team members to support the CAP.

4.3.3 Flight Standards OM—Concur with the CAP.

4.4 Aircraft Conformity Evaluation—Module 4.

4.4.1 Certificate Holder—Reviews the certificate holder's internal aircraft conformity inspection, if applicable. Forward the ACCD and the Aircraft Information Form, or accepted/approved company forms, to the CPT at least 10 business-days prior to the aircraft conformity evaluation. The certificate holder will confirm that appropriate personnel are available for this evaluation.

4.4.2 CPM—Confirm that the completed Aircraft Information Form and accepted/approved company forms are current and turned in 10 business-days prior to inspection.

4.4.3 CPT—Review documents listed on the aircraft document request list.

4.4.4 CPM—Review and confirm the certificate holder's aircraft conformity evaluation and records inspection to confirm all records are available to continue to the next step.

4.4.5 CPT—Use the ACCD to evaluate the aircraft and records.

4.4.6 CPM—Compare the CPT's evaluation results to the certificate holder's conformity evaluation.

4.4.7 CPM—Notify the certificate holder in writing of evaluation results and any discrepancies requiring correction.

4.4.8 CPM—Reviews corrections based on the ACCD evaluation. Update the SOE.

4.4.9 CPM—Accept or reject the corrective action(s). If the corrective action(s) require revision to the manuals, then return to the system safety review process. When the aircraft conformity is satisfactory, notify the certificate holder and proceed to the evacuation/ditching demonstration, or proving tests.

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4.5 Demonstration Plans.

4.5.1 CPM—Plans for the proposed operation:

- Emergency evacuation plan.
- Ditching plan.
- Proving test plan.

4.5.2 CPM—Reviews the certificate holder's letter of authorization (LOA) to operate in accordance with § 119.33(c) prior to proving tests.

4.5.3 CPM—Reviews the evacuation/ditching demonstration plans found in Volume 3, Chapter 30.

4.5.4 CPM—Forward the evacuation/ditching demonstration plan to the ASI or ASI—Cabin Safety (ASI-CS) for review and resource planning.

4.5.5 ASI/ASI-CS—Review the emergency evacuation/ditching demonstration plan and submit any recommendations or procedures to the project manager.

4.5.6 CPM—Return the emergency evacuation/ditching demonstration plans and any recommendations/procedures to the certificate holder to make corrections, and resubmit plan to include an updated SOE.

4.5.7 CPM—If the plan is acceptable, meet with the CPT to establish resources needed and plan the demonstration.

4.5.8 CPM—If applicable, respond to the certificate holder's request for a reduction of proving test hours. Early completion of proving tests may require Flight Standards division approval, as found in Volume 3, Chapter 29, Section 7.

NOTE: Part 121, § 121.163 contains authority for us to reduce the proving flight-hours specified in the basic regulation.

4.5.9 Certificate Holder—Submit a request for an LOA, as required by § 119.33(c), for demonstrating appropriate operations under part 121. Make this request at least 10 business-days before any aircraft flight demonstration.

4.5.10 Certificate Holder—Submit updated draft OpSpecs.

4.5.11 CPM—Ensure draft OpSpecs have been completed by the Flight Standards office.

4.5.12 Flight Standards OM/CPM—Issue LOA in accordance with Volume 3, Chapter 29 and § 119.33(c).

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4.6 Tabletop Exercise.

4.6.1 CPT—Tabletop exercises are a valuable tool to determine if the certificate holder's systems and personnel are ready to perform at a level that justifies conducting proving test flights. The successful completion of a tabletop exercise is an excellent indicator that the certificate holder can conduct the proving test flights within the budget set by the certificate holder and without modification to the submitted plan. If the decision is made to conduct a tabletop exercise, follow the procedures found in Volume 3, Chapter 29, Section 5. Develop scenarios to assess performance during tabletop exercises.

4.6.2 CPT/Certificate Holder—Conduct tabletop exercises and discuss the results of each scenario.

4.6.3 CPM—If any scenario is unsatisfactory, then confirm the certificate holder has made corrections to its system design or has corrected personnel performance issues before beginning proving tests.

4.7 Evacuation/Ditching Demonstrations (as required).

4.7.1 CPM/ASI-CS—Discuss demonstration plan with the CPT.

4.7.2 CPM/ASI-CS—Brief the certificate holder on the plan and expectations.

4.7.3 CPT/Certificate Holder—Conduct evacuation/ditching demonstrations, as applicable.

4.7.4 CPT—Observe emergency evacuation/ditching demonstrations and document the results on FAA Form 8430-1, Emergency Evacuation Demonstration Report, and retain for the project report. Record EPA(s) and/or C DCTs.

4.7.5 CPM—After the Flight Standards OM reviews and initials the report, forward a completed copy of FAA Form 8430-1 to the appropriate Flight Standards division.

4.7.6 CPM—Save completed FAA Form 8430-1 copies.

4.8 Assess Certificate Holder's Facilities—Module 4.

4.8.1 CPT—Assess at least the following facilities using the appropriate DCTs:

- Station Facilities (Operations).
- Maintenance Facility/Main Maintenance Base.
- Line Station Facilities (Airworthiness).
- Maintenance Providers (Airworthiness).

NOTE: The CPT may accomplish these assessments prior to or during proving tests by observing the certificate holder conduct their own internal safety assessment (see step 4.1).

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4.9 Prepare for Proving Tests.

4.9.1 CPM—Confirm that the OST/Department of Transportation (DOT) has issued the show cause order "if required" by the OST/DOT.

4.9.2 CPM—Conduct a predemonstration test meeting with the CPT, as found in Volume 3, Chapter 29, Sections 2 and 4.

4.9.3 CPM—Schedule the CPT for proving tests.

4.9.4 CPT—Develop proving test scenarios that facilitate the collection of data to complete the EPA.

4.10 CPT and Certificate Holder Conduct Proving Tests.

4.10.1 CPM—Coordinate the proving test plan with the assigned CPT members and assign tasks to participating team members. Conduct the proving tests using the five-phase process described in Volume 3, Chapter 29, Section 2.

4.10.2 CPT and Certificate Holder—Meet to discuss the proving test protocols and the proposed flight schedule.

4.10.3 CPT—Prior to each day's proving tests, conduct a daily briefing with the certificate holder's participants to review the day's plan.

4.10.4 CPT and Certificate Holder—Prior to each day's proving tests, conduct a briefing with the certificate holder to review the day's plan.

4.10.5 CPT and Certificate Holder—Conduct proving tests.

4.10.6 CPT—Use the Proving/Validation Test Scenario Worksheet as found in Volume 3, Chapter 29, Section 5, to collect data. All team members should reach a consensus on the results of each scenario.

4.10.7 CPT and Certificate Holder—Debrief the results at the end of each day.

4.10.8 CPT—Document results of each scenario on the Proving/Validation Test Scenario Worksheet.

4.10.9 CPM—If all test objectives are met, and the certificate holder has demonstrated the ability to conduct line operations in compliance with regulations and safe operating practices, then recommend to conclude the proving tests.

4.10.10 CPM—If test objectives are not met or the certificate holder has not demonstrated its ability to conduct line operations in compliance with regulations and/or safe operating practices, then evaluate the need for an extension or termination of the proving tests.

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4.10.11 Flight Standards OM—Notify the appropriate Flight Standards division of normal completion, early completion, or proving tests that were terminated due to an unsatisfactory performance.

4.11 Data Reporting—Module 4.

4.11.1 CPT—Enter EPA, C DCT, and DOR data in accordance with DQGs and submit.

4.11.2 CPT—Submit the EPA when it is complete.

4.12 Data Review—Module 4.

4.12.1 DQR—Ensure data meets DQGs and save records to the automation.

4.13 Analysis and Assessment—Module 5.

4.13.1 CPM—Conduct an AAA meeting with members of the CPT.

4.13.2 PI(s)—Make a bottom-line assessment for each element and document on the AAA.

4.14 Performance AAA—Module 5.

4.14.1 PI(s)—Follow the guidance in Module 5 to determine the appropriate course of action for each element.

4.14.2 PI(s)—If the certificate holder's system meets performance standards but has minor problems, determine if additional data collection, monitoring, or action is necessary.

4.15 Phase 4 Review.

4.15.1 CPM/CTL—Verify the completion of all steps in Phase 4 before proceeding to Phase 5.

PHASE 5—ADMINISTRATIVE FUNCTIONS.

5.1 Approve OpSpecs.

5.1.1 CPM—Close out the configuration change request in the automation. Approval is issued by letter, by stamp of approval, by the issuance of OpSpecs, or in accordance with procedures.

5.1.2 CPM/PI(s)—Verify that all required changes to the enhanced Vital Information Database (eVID) and OpSpecs have been completed. Coordinate with PIs on approval/disapproval of the certificate holder's OpSpecs.

5.1.3 CPM/PI(s)—Validate that all manuals have been either accepted or approved.

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5.1.4 PI(s)—Review the OST limitations.

5.1.5 PI(s)—Sign OpSpecs.

5.2 Issue Air Carrier Certificate (as applicable).

5.2.1 Flight Standards OM—Review and forward amended certificate to the appropriate Flight Standards division manager.

5.2.2 Flight Standards Division Manager—Sign the Air Carrier Certificate and return to the Flight Standards office.

5.2.3 Flight Standards OM—Issue the amended Air Carrier Certificate.

5.3 Prepare and Submit Final Report to Flight Standards OM.

5.3.1 CPM/CTL—Ensure the report includes the following:

- Letter of application.
- Proving test report.
- Emergency evacuation/ditching demonstration report.
- List of OpSpecs paragraphs issued (as applicable).
- All formal correspondence with the certificate holder.

5.3.2 Flight Standards Office—Retain the final report.

5.4 Phase 5 Review.

5.4.1 CPM/CTL—Verify the completion of all steps in Phase 5.

5.4.2 CPM—Send message to the CTL assigned by the National Program Office Branch CEPO to have team members remove certificate holder company manuals from their computers.

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Figure 10-11-2B. Schedule of Events

Name of Applicant:	**Date:**	
Events	**Date Proposed**	**Date Accomplished**
Phase 1—Initial Inquiry		
Certificate Holder Initiates Change Request.		
Flight Standards Office Briefs Certificate Holder on Major Change Process Document (MCPD).		
Phase 2—Application		
Certificate Holder Submits Request and Required Documents to Support Application.		
Application Meeting.		
Phase 3—Element Design Assessment (EDA)		
Receive Initial Approval for Initial Cadre Check Airman (ICCA) Training.		
Begin ICCA Training.		
All Manuals Approved/Accepted.		
Flightcrew Member Training		
Begin Instructor Training.		
Begin Basic Indoctrination.		
Begin Emergency Training.		
Begin Ground Training.		
Begin Flight Training.		
Begin Check Airmen Training.		
Flight Follower/Dispatch Training		
Begin Instructor Training.		
Begin Basic Indoctrination.		
Begin Ground Training.		
Begin Competency Check Air Transportation Supervisor (ATS) Training.		
Begin FAA-Administered Competency Checks to ATS (as applicable). (Note: A dispatch safety inspector (DSI) must administer the check.)		
FAA-Observed Comp Check Administered by ATS.		
Operating Familiarization (Must be completed within 90 days of the initial introduction of the aircraft).		
Competency Checks.		

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Figure 10-11-2B. Schedule of Events (Continued)

Events	Date Proposed	Date Accomplished
Flight Attendant (F/A) Training		
Begin Instructor Training.		
Begin Basic Indoctrination.		
Begin Emergency Training.		
Begin Ground Training.		
Begin Competency Check Supervisor Training.		
Maintenance Training		
Begin Instructor Training.		
Begin Basic Indoctrination.		
Begin Aircraft Ground Training.		
Begin Maintenance Aviation Safety Inspector (ASI) Training (Required Inspection Items (RII)).		
Training Completed for Phase 4 Participants.		
Phase 4—Element Performance Assessment (EPA)		
Proposed Operation Start Date.		
Submit Operational Readiness Results.		
Submit Emergency Evacuation and Ditching Plan (as required).		
Submit Proving-Run Test Plan.		
Submit Completed Aircraft Conformity Evaluation Documentation.		
Aircraft Ready for FAA Conformity Evaluation.		
Tabletop Exercise.		
Evacuation/Ditching Demonstration.		
Generate Proving Test Letter of Authorization (LOA).		
Conduct Proving Test.		
Finish Proving Runs.		
Assess Certificate Holder’s Facilities.		
Proposed Operation Start Date.		

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Figure 10-11-2C. Major Change Process Document Tracking Report

MCPD TRACKING REPORT

PROJECT IDENTIFICATION

CERTIFICATE HOLDER	PROJECT NUMBER

PHASE 1—INITIAL INQUIRY

STEP	TITLE	DATE CLOSED	INITIALS	COMMENTS
1.1	Certificate Holder Initial Inquiry.			
1.2	Flight Standards Office Briefing to Certificate Holder.			
1.3	Phase 1 Review.			

PHASE 1

DATE COMPLETED	INITIALS	COMMENTS

PHASE 2—APPLICATION

STEP	TITLE	DATE CLOSED	INITIALS	COMMENTS
2.1	Certificate Holder Submits Request.			
2.2	Establish Certification Team.			
2.3	Examination of Submissions.			
2.4	Element Design Assessment (EDA) Planning.			
2.5	Phase 2 Review.			

PHASE 2

DATE COMPLETED	INITIALS	COMMENTS

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Figure 10-11-2C. Major Change Process Document Tracking Report (Continued)

PHASE 3—ELEMENT DESIGN ASSESSMENT (EDA)

STEP	TITLE	DATE CLOSED	INITIALS	COMMENTS
3.1	Planning Meeting—Module 2.			
3.2	Resource Management—Module 3.			
3.3	Initial Cadre Training.			
3.4	Other Initial Training.			
3.5	Data Collection—Module 4.			
3.6	Data Reporting—Module 4.			
3.7	Data Review—Module 4.			
3.8	Analysis and Assessment—Module 5.			
3.9	Action—Module 5.			
3.10	Status Check—Programs and Approvals Process Proving-Test Plan.			
3.11	Operations Specifications (OpSpecs).			
3.12	Phase 3 Review.			

PHASE 3

DATE COMPLETED	INITIALS	COMMENTS

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Figure 10-11-2C. Major Change Process Document Tracking Report (Continued)

PHASE 4—ELEMENT PERFORMANCE ASSESSMENT (EPA)

STEP	TITLE	DATE CLOSED	INITIALS	COMMENTS
4.1	Confirm Operational Readiness.			
4.2	EPA Planning—Module 2.			
4.3	Resource Management—Module 3.			
4.4	Aircraft Conformity Evaluation—Module 4.			
4.5	Demonstration Plans.			
4.6	Tabletop Exercise.			
4.7	Evacuation/Ditching Demonstrations.			
4.8	Assess Certificate Holder's Facilities.			
4.9	Prepare for Proving Flights.			
4.10	Certification Project Team (CPT) and Certificate Holder Conduct Proving Flights.			
4.11	Data Reporting—Module 4.			
4.12	Data Review—Module 4.			
4.13	Analysis and Assessment—Module 5.			
4.14	Action—Module 5.			
4.15	Phase 4 Review.			

PHASE 4

DATE COMPLETED	INITIALS	COMMENTS

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Figure 10-11-2C. Major Change Process Document Tracking Report (Continued)

PHASE 5—ADMINISTRATIVE FUNCTIONS

STEP	TITLE	DATE CLOSED	INITIALS	COMMENTS
5.1	Approve OpSpecs.			
5.2	Issue Air Carrier Certificate (as applicable).			
5.3	Prepare and Submit Final Report to Flight Standards Office Manager (OM).			
5.4	Phase 5 Review.			

PHASE 5

DATE COMPLETED	INITIALS	COMMENTS

10-11-2-7 through 10-11-2-29 RESERVED.

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