APPENDIX 6. Air Transportation Oversight System

FOREWORD

The Air Transportation Oversight System (ATOS) is the new air carrier oversight process. It was developed by Flight Standards (AFS) with the support of Sandia National Laboratories. ATOS is a system approach to Federal Aviation Administration (FAA) certification and surveillance oversight. It uses system safety principles and risk management to make sure that air carriers have safety built into their operating systems.

Title 49 of the United States Code authorizes the Secretary of the Department of Transportation to conduct inspections of air operators. The FAA is empowered, by statutory requirement, "...to carry out the functions, powers, and duties of the Secretary relating to aviation safety."

In 1996, AFS ordered all Flight Standards District Offices (FSDO) to "stand down" for one day and to review their internal policies, procedures, and methods of operations, performance, and outcomes. This led to a 90-Day Safety Review, completed in September 1996. The final report of the 90-Day Safety Review contained six principal recommendations. Recommendation 2A was singled out by AVR for quick review, response, and implementation. It reads:

> *"Initiate a project to make surveillance of air carriers more systematic and targeted to deal with identified risks. The current system should be improved by requiring comprehensive annual surveillance plans for each air carrier. These plans should be managed by Principal Inspectors to validate their respective air carrier's systems and to target dynamically inspections throughout the year. Guidance should be provided to Principal Inspectors on when to reduce or increase planned surveillance based on safety analyses. Guidance should also be developed to link enforcement policy with targeted surveillance."*

In response to recommendation 2A of the 90-Day Safety Review, the AFS Quality Management Council formed the Surveillance Improvement Process (SIP) Team. The SIP Team's task was to investigate and make recommendations for improving the surveillance process for all air carriers. In July 1997, the SIP Team finished developing requirements for an improved surveillance system and process. They defined the current surveillance process, identified requirements to address deficiencies found in the current system, and created the conceptual design for an improved surveillance process based on those requirements.

The next step was to reengineer the surveillance planning function. The AFS Program Management Committee established the Improved Surveillance Planning Process (ISP) Team in June 1997. The ISP Team used the high-level SIP Certificate Management process to design a Model Surveillance Work Plan for Principal Inspectors.

AFS grouped several ongoing efforts under the Challenge 2000 umbrella, including the SIP/ISP work, the Certification, Standardization and Evaluation Team (CSET) program, and the Geographic Program Redesign. These were the first steps in the implementation of what was to become ATOS.

AFS and the Professional Airways Systems Specialists (PASS) organizations jointly chartered the ATOS Work Group to figure out how to implement ATOS by October 1, 1998 for an initial cadre of air carriers. The ATOS initial cadre consists of the ten air carriers having the largest number of passenger enplanements. The ATOS Work Group developed recommendations for policies and procedures, automation, training, continuous improvement, system process audit, and implementation strategies. The air carriers included in the initial cadre for ATOS Phase 1 implementation are:

- Alaska (ASAA);
- American (AALA);
- America West (AWXA);
- Continental (CALA);
- Delta (DALA);
- Northwest (NWAA);
- Southwest (SWAA);
- Trans World Airways (TWAA);
- United (UALA); and
- U.S. Airways (USAA).

AFS established a Continuous ATOS Development (CAD) team in 1999 to complete, review and revise the ATOS processes. The Continuous ATOS Development effort will fully integrate air carrier certification and surveillance processes as envisioned in the SIP. This is the longer-term solution to developing and implementing an effective oversight system that uses system safety and risk management principles. ATOS will always be subject to continuous improvement efforts.

This appendix prescribes policy, delegates authority, and assigns responsibility for ensuring agency compliance with the provisions of ATOS. It also describes how ATOS evolved, defines its objectives, and provides an overview of system safety concepts.

Recognizing that system improvement is a vital element in the system's effectiveness and responsiveness to FAA personnel, this appendix reflects a major revision to ATOS policies and procedures. Users of this appendix have the opportunity to offer suggestions for improvements to this appendix, through the ATOS automated "problem reporting and feedback" system and through the use of FAA Form 1320-19, Directives Feedback Information.

/s/
Ava L. Mims
Acting Director, Flight Standards Service

APPENDIX 6. Air Transportation Oversight System

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CHAPTER 1. ATOS OVERVIEW AND SYSTEM CONFIGURATION

SECTION 1. GENERAL

101. PURPOSE. This appendix establishes and describes the Air Transportation Oversight System (ATOS) as the system safety approach to FAA certification, surveillance, and certificate management.

102. DISTRIBUTION. This change is distributed to all addressees on the special distribution list ZFS-840.

103. RESERVED.

104. EXPLANATION OF CHANGES. The original Change 13 that was coordinated in May of 2000 is currently being reviewed and revised and will not be published at this time. Therefore, this revision to Appendix 6 is being issued as Change 13. Recognizing that continuous improvement is a vital element in the system's effectiveness and responsiveness to FAA personnel, this change reflects a major revision to ATOS policies and procedures.

105. AUTHORITY TO CHANGE THIS APPENDIX. The Flight Standards Certification and Surveillance Division, AFS-900, has the authority to make changes to all ATOS policies and procedures and, in coordination with the Air Transportation Division, AFS-200, and the Continuous Airworthiness Maintenance Division, AFS-300, may issue changes to this appendix necessary to implement and manage ATOS. The Director of Flight Standards reserves the authority to approve changes which establish policy, delegate authority, or assign responsibility.

106. DEFINITIONS. The following definitions apply to this appendix.

TERM	DEFINITION
Acceptable Risk	An identified risk that is allowed to persist without further action. The decision to accept a risk is made with full knowledge of who is exposed to this risk.
Aging Aircraft	An aircraft of any make or model that is 15 years old or older.
Air Carrier Assessment Tool	A planning tool designed to analyze and assess the elements of an air carrier's systems using a series of risk indicators.
Air Carrier Dynamics	Aspects of the organization and environment that the air carrier directly controls and that could be used to enhance system stability and safety.
Air Carrier Programs and Procedures (3.1)	The sub-system by which an air carrier ensures compliance with its programs and procedures for functioning within its operating environment.

TERM	DEFINITION
Air Carrier System	A group of interrelated processes which are a composite 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 for an air carrier. For purposes of the new certification and surveillance processes, seven air carrier systems have been defined, including: • 1.0 Aircraft Configuration Control • 2.0 Manuals • 3.0 Flight Operations • 4.0 Personnel Training and Qualifications • 5.0 Route Structures • 6.0 Airman and Crewmember Flight, Rest, and Duty Time • 7.0 Technical Administration
Aircraft (1.1)	The sub-system by which an air carrier ensures their aircraft meet airworthiness and operational requirements and are safe for operations.
Aircraft Configuration Control (1.0)	The system by which an air carrier maintains the physical condition of the aircraft and associated components.
Airman and Crewmember Flight, Rest, and Duty Time (6.0)	The system which prescribes time limitations for air carrier employees.
Airman and Crewmember Limitations for Domestic, Flag, Supplemental, and Commercial (6.1)	The sub-system by which an air carrier ensures airman/crewmembers meet the regulatory time limitations.
Analyst	The ATOS Operations Research Analyst (ORA) responsible for assisting the CMT in collecting and analyzing air carrier data.
Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial (5.1)	The sub-system by which an air carrier ensures they maintain the facilities to support their approved routes and areas of operation.
Authority Attribute	There is a clearly identifiable, qualified, and knowledgeable person with the authority to establish and modify a process.
Benchmark	A standard of measurement or evaluation that provides best-in-class performance results.

TERM	DEFINITION
Build Specification	The specifications that the air carrier provides for maintenance, preventive maintenance, inspection of aircraft, aircraft engines, propellers, and appliances. The air carrier provides this specification to its own shop and to outsource providers
Certificate Management Team (CMT)	The team responsible for the surveillance of a specific air carrier. The Certificate Management Team will develop and execute a Comprehensive Surveillance Plan tailored to an air carrier.
Comprehensive Surveillance Plan (CSP)	The carrier-specific surveillance plan developed by the CMT at the Annual Surveillance Planning Meeting. The CSP documents the planned annual surveillance for the air carrier at the system element level.
Control Attribute	There are checks and restraints designed into a process to ensure a desired result.
Crewmember and Dispatch Qualifications (4.3)	The sub-system by which an air carrier ensures crewmembers and dispatchers are qualified.
Criticality	The likelihood that a failure of an air carrier system, sub-system, or element could lead to an unsafe condition.
Data Evaluation Program Manager	The CMT member responsible for reviewing inspection reports and records to ensure they meet data quality guidelines.
Dynamic Observation Report	The Dynamic Observation Report (DOR) allows inspectors to record certain surveillance observations outside the comprehensive surveillance planning process.
Element	One or more interrelated actions completed to support an air carrier sub-system. Elements are the level at which Safety Attribute and Element Performance Inspections are applied to all Part 121 carriers participating in ATOS.
Element Performance Inspection (EPI)	The ATOS inspection type designed to determine if an air carrier adheres to its written procedures and controls for each system element, and that the established performance measures for each system element are met. EPI are planned for and executed at the element level and accomplished by individual inspectors.
Environmental Criticality	Those aspects of the air carrier's surroundings that could lead to or trigger a failure in one of their systems, sub-systems, or elements and potentially create an unsafe condition.
Flight Operations (3.0)	The system which pertains to aircraft movement.

TERM	DEFINITION
Hazard	Anything, real or potential, that could make possible, or contribute to making possible, an accident.
Heightened Surveillance	Surveillance of an element, within a defined planning cycle, increased to a frequency greater than quarterly as determined by the Principal Inspector. A thorough system assessment, such as an SAI, should be considered for the element.
High Criticality	A high likelihood that a failure in this element could lead to an unsafe condition.
Human Factors	The overall set of operating, system, safety, ergonomic, and environmental considerations that the air carrier has implemented to ensure the safety, health and well-being, motivation, happiness, and continued effectiveness and performance of their employees.
Identified Risk	A risk that has been identified through various analysis techniques.
Interfaces Attribute	The air carrier identifies and manages the interactions between processes.
Key Personnel (7.1)	The sub-system by which an air carrier ensures that qualified management and technical personnel with operational control are in place and conducting operations at the highest level of safety.
Low Criticality	A low likelihood that a failure in this element could lead to an unsafe condition.
Maintenance Organization (1.3)	The sub-system by which an air carrier ensures the continuous airworthiness and servicing of aircraft in accordance with their approved procedures.
Maintenance Personnel (6.2)	The sub-system by which an air carrier ensures maintenance personnel meet duty time limitations.
Maintenance Personnel Qualifications (4.1)	The sub-system by which an air carrier ensures maintenance personnel are properly certificated and authorized to perform assigned duties.
Manual Management (2.1)	The sub-system by which an air carrier prepares and maintains the manuals for the use of and guidance to its personnel.
Manuals (2.0)	The system for controlling the information and instruction that defines and governs air carrier activities.
Mechanics and Repairman Certification (4.4)	The sub-system by which an air carrier ensures that airmen, who approve aircraft for return to service, are properly certificated.

TERM	DEFINITION
Medium Criticality	A moderate likelihood that a failure in this element could lead to an unsafe condition.
Metrics	A specific method to measure the results of the surveillance implemented for a specific carrier based on a customized plan.
New Entrant Carrier	An air carrier that has conducted operations under Part 121 for less than five years.
Operational Control	Operational control with respect to a flight refers to the exercise of authority over initiating, conducting, or terminating a flight.
Operational Release (3.2)	The sub-system by which an air carrier ensures all activities required for safe dispatch and continuation of a flight to its destination.
Operational Risk	An identified risk that has the potential to affect the operations of the air carrier.
Operational Stability	Those aspects of their organization and environment over which the air carrier has no direct control and that, when managed effectively, could enhance system stability and safety.
Outsourcing	The practice of contracting out internal air carrier programs and processes, such as maintenance, training, and ground handling, to external, independent vendors and suppliers, where oversight for the quality of the outsourced items remains with the air carrier.
Performance History	The results of the air carrier's operations over time.
Performance Measure	A description of the desired outcome of an air carrier element process, used to determine if the desired results of that process were achieved.
Personnel Training and Qualifications (4.0)	The system by which air carrier personnel are trained and qualified.
Procedures Attribute	There are documented methods for accomplishing a process.
Process	Linked activities designed to produce a desired result or end product for an air carrier.
Process Measurement Attribute	The air carrier measures and assesses its processes to identify and correct problems or potential problems.
Records and Reporting Systems (1.2)	The sub-system by which an air carrier manages the records used to show the aircraft are airworthy; that reflect the air carrier's use of its procedures; and that ensure the issuance of required reports.

TERM	DEFINITION
Responsibility Attribute	There is a clearly identifiable, qualified, and knowledgeable person who is accountable for the quality of a process.
Risk	An expression of the probability and impact of an undesired event in terms of event severity and event likelihood.
Risk Indicator	A grouping of safety and/or performance-related data that reflects an area of potential risk which is expected to have sufficient data or justification to calculate a representative value for a particular air carrier system, sub-system, or element.
Risk Management	An iterative management activity dedicated to assuring that risk is identified, documented, eliminated, or controlled within defined program risk parameters.
Route Structures (5.0)	The system by which an air carrier maintains facilities on approved routes.
Safety	An inherent attribute of an air carrier's properly designed systems, sub-systems, and elements.
Safety Attributes	The authority, responsibility, procedures, controls, process measurements, and interfaces that the air carrier has designed into its systems.
Safety Attribute Inspection (SAI)	The ATOS inspection type designed to appraise the quality of the safety attributes, i.e. (responsibility, authority, controls, procedures, process measurement, and interfaces) associated with each system element for an air carrier. SAI are executed at the element level, usually planned for at the sub-system level, and accomplished by a team of inspectors.
SAI Team	The team of inspectors assigned to accomplish an SAI for a specific CMT and air carrier. SAI Team is also a column on the CSP-SAI indicating the inspector(s) for the SAI inspection as well as the location for the SAI inspection and any other specific instructions necessary for the inspector(s) to properly complete the SAI inspection.
System	A group of interrelated processes which are a composite 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 for an air carrier.

TERM	DEFINITION
System Analysis Team	A team that includes participants from the Certificate Management Team, the air carrier, other FAA organizations, and other non-FAA entities (e.g., the manufacturer), as required, to accomplish further analysis and determine root causes of system deficiencies or potential system deficiencies.
System Approach	The structured, safety-driven means by which the FAA will certificate and surveil elements that are designed to interact predictably within the air carrier's systems and sub-systems.
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 lifecycle to achieve an acceptable level of risk within the constraints of operational effectiveness, time, and cost.
System Safety Analysis	An activity designed to quantify air carrier systems through modeling and analysis of their sub-systems and assessment of their processes and procedures to explore and understand the interactions of the safety elements.
System Safety Categories	The six categories of system safety addressed on the System Safety Analysis Tool: Safety Attributes, Safety Culture, Communication, Accountability, Training Programs, and Potential Problem Areas.
System Stability	The state of balanced constancy and safety that results when an air carrier is able to effectively manage both the aspects of their organization and their environment; those they control directly and those over which they have no direct control.
Technical Administration (7.0)	The system for addressing all other aspects of air carrier certification and operations.
Training Program (4.2)	The sub-system by which an air carrier ensures personnel are trained to perform assigned duties in accordance with the air carrier's approved programs.
Unacceptable Risk	That risk which cannot be tolerated by the managing activity. It is a subset of identified risk that must be eliminated or controlled.

107. POLICY. ATOS is the FAA's business process for air carrier oversight. Exceptions to the requirements and standards described in this appendix must have the specific approval of the Director of Flight Standards Service.

108. SCOPE. Effective October 1, 1998, the ATOS surveillance process is used for the initial cadre air carriers.

109. RELATED PUBLICATIONS. The surveillance program for all other Title 14 of the Code of Federal Regulations (14 CFR) part 121 certificated air carriers is conducted under existing guidance. This guidance includes the latest edition of the following publications:

a. National Program Guidelines (NPG)

b. Policies and procedures contained in 8400.10, Volume 6 – Surveillance

c. Policies and procedures contained in 8300.10, Volume 3 - Aircraft and Equipment

d. Other applicable FAA orders addressing surveillance of part 121 certificate holders.

NOTE: For the initial cadre air carriers and other air carriers designated by AFS-1, wherever the policies and procedures contained in this appendix conflict with other published policies and procedures, the guidance in this appendix will take precedence.

110. OBJECTIVES. The primary objectives of ATOS are to:

a. Improve the certification and surveillance processes for air carriers;

b. Ensure regulatory compliance and incorporate a systems approach targeted to address identified risks, based on a Comprehensive Surveillance Plan for each air carrier, and managed by the Principal Inspectors and the Certificate Management Team (CMT);

c. Establish the planning, staffing, and training infrastructure needed to support a systems approach to surveillance;

d. Implement CMT-based surveillance planning and execution;

e. Integrate Geographic Inspectors into the surveillance planning and implementation processes;

f. Standardize the surveillance processes to include safety attribute and element performance inspections;

g. Reengineer the inspection data collection and reporting process and system;

h. Enhance the surveillance process to include structured evaluation of surveillance results; and

i. Provide the inspection results data needed to support systems and root cause analysis.

111. RESPONSIBILITIES. The general responsibilities incumbent on all users of ATOS are to use and maintain the system in accordance with the policies and procedures defined in this document. Other specific responsibilities for ATOS are listed below:

a. **Director Flight Standards Service, AFS-1,** is responsible for the Flight Standards Safety Mission.

b. **FAA Headquarters** provides ATOS policy and procedures, and resolves issues.

c. **Regional Offices** implement ATOS and make sure that there are enough ongoing resources (e.g. funding and personnel).

Regional offices also resolve issues that have been elevated by the CHDO/CMO.

d. **The Certificate Holding District Office (CHDO/CMO)** is responsible for all CMT personnel in that office. It also manages the certificate for its assigned air carrier.

e. **The Flight Standards District Office (FSDO)** is responsible for all Geographic Inspectors assigned to Certificate Management Teams. The FSDO works with the CHDO/CMO to support the required CMT activities.

f. **The Certification, Standardization, and Evaluation Team (CSET) CMO** assists in the development of air carrier certification policy and procedures and also assists field offices with new applicant certifications and the surveillance of non-ATOS air carriers.

g. **The Air Transportation Oversight System (ATOS) CMO** collects feedback, assesses ATOS process effectiveness, and works to improve ATOS processes.

h. **The System Process Audit Program Staff, AFS-40,** conducts independent audits of ATOS processes.

112. ORGANIZATION. This appendix models the system safety approach by organizing each Chapter according to safety attributes. Chapters 1 through 8 cover the eight ATOS process modules. Chapter 9 contains links to figures and a list of ATOS acronyms.

113. - 121. RESERVED.

*S*ECTION 2. ATOS OVERVIEW

122. INTRODUCTION. The ATOS process analyzes the safety of air carrier operating systems using system safety principles, safety attributes, risk management, and structured system engineering practices.

123. ATOS MODEL. ATOS uses a system safety approach that is system-based and standardized. The ATOS system safety approach has checks and balances, emphasizes communications, and results in actions based on inspection data reporting, evaluation, and analysis.

124. ATOS TOOLS. ATOS uses structured, automated tools to develop a dynamic, flexible, air-carrier-specific Comprehensive Surveillance Plan (CSP). The Air Carrier Assessment Tool (ACAT) looks for indicators of risk in the air carrier's systems. The results of the ACAT determine the frequency of inspections in the CSP.

125. ATOS SURVEILLANCE PROCESS. ATOS surveillance assesses an air carrier against established performance measures in relation to specific regulatory requirements and safety attributes for each element of an air carrier's systems. The ATOS processes help Aviation Safety Inspectors (ASI) identify potential weaknesses in air carrier systems. Because of the training and guidance inspectors receive, their inspection reports give greater insight into the overall state of the air carrier's systems. With the inspection report data, the CMT can better analyze the root causes of system deficiencies.

126. ATOS PROCESS MODULES. ATOS includes eight process modules. These eight modules are illustrated in Figure 1-1: ATOS Process Modules. A description of each module follows.

a. **System Configuration [1].** The purpose of System Configuration is to provide the infrastructure management activities that are vital to effective certification, certificate management, and surveillance. These activities occur before, during and after certification. They include:

(1) Developing and maintaining national certification baseline standards;

(2) Establishing the infrastructure for new entrant certification; and

(3) Maintaining and managing the certificates for all part 121 air carriers.

b. **Certificate Management [2].** The purpose of Certificate Management is to:

(1) Assess the air carrier and evaluate assessment data;

(2) Develop a Comprehensive Surveillance Plan; and

(3) Identify the Certificate Management Team structure for managing certificates and supporting system safety analysis.

c. **Surveillance Resource Management [3].** The purpose of Surveillance Resource Management is to provide the resources, funding, and training to support ATOS.

d. **Surveillance Implementation [4].** The purpose of Surveillance Implementation is to implement the Comprehensive Surveillance Plan (CSP). This module describes how to conduct the inspections in the CSP.

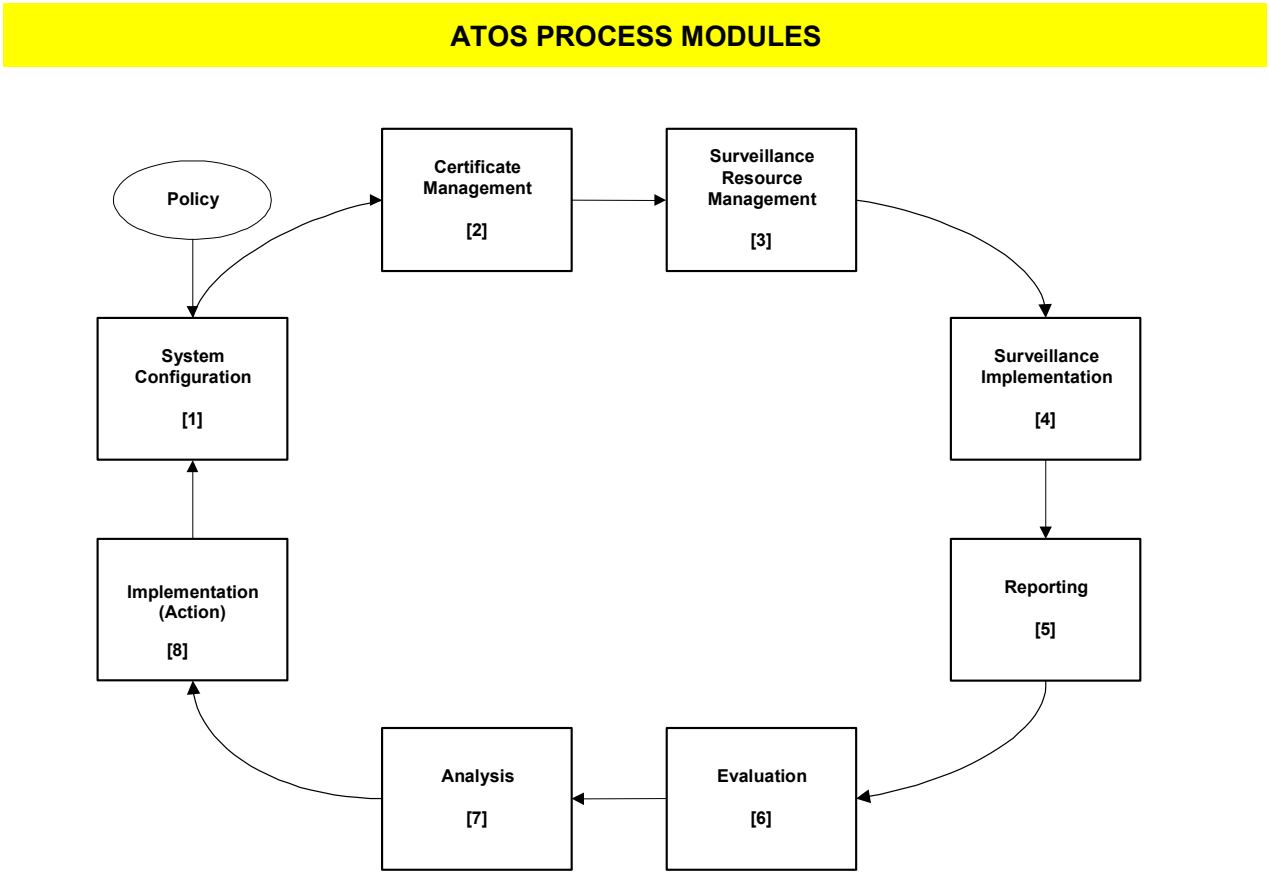
e. **Reporting [5].** The purpose of the Reporting process is to transfer into the ATOS Data Repository the inspection data gathered during Surveillance.

f. **Evaluation [6].** The purpose of the Evaluation process is to validate the inspection data to make sure it meets ATOS Data Quality Guidelines.

g. **Analysis [7].** The purpose of Analysis is to use the data collected through the Surveillance Implementation, Reporting, and Evaluation processes to provide CMT decision-makers the information they need. The ATOS Analysis Module organizes surveillance data and identifies what follow-up actions must be taken.

h. **Implementation (Action) [8].** The purpose of Implementation is to take action as appropriate, based on all available information, including ATOS surveillance data.

Figure 1-1



127. SYSTEM SAFETY APPROACH. System safety is a multidisciplinary approach to systematically make a system, product, process, operation, or facility as safe as is practical. System safety covers the entire spectrum of activities from the design of hardware to the culture and attitudes of the people involved.

a. **Definition of System Safety.** System safety is the application of special technical and managerial skills to identify, analyze, assess, and control hazards and risks. In this approach, an entire system is viewed as an integrated whole. A "system" is a group of interrelated processes all operating in a specific environment to perform a specific task or achieve a specific purpose, support, or mission requirement for an air carrier. These processes are made up of people, procedures, materials, tools, equipment, facilities, and software.

b. **Principles of System Safety.** The principle of system safety is that safety is an inherent property of a system. Safety cannot be inspected into a system; it must be designed into a system. Risk identification, assessment, and management are critical aspects of system safety.

128. AIR CARRIER SYSTEMS, SUB-SYSTEMS AND ELEMENTS. ATOS uses a structured process to analyze how systems, sub-systems, and elements interact. Seven air carrier systems form the basis for the ATOS system-based approach. Each of these systems has a defined set of sub-systems and elements. Elements are interrelated activities or actions completed to support air carrier sub-systems and systems.

a. These seven air carrier systems are:

(1) **Aircraft Configuration Control** is how an air carrier maintains the physical condition of the aircraft and associated components.

(2) **Manuals** System controls the information and instructions to define and govern the air carrier activities.

(3) **Flight Operations** pertains to aircraft movement.

(4) **Personnel Training and Qualifications** includes the processes that the air carrier uses to make sure its personnel are trained and qualified.

(5) **Route Structures** is the system by which an air carrier maintains facilities on approved routes.

(6) **Airman and Crewmember Flight, Rest, and Duty Time** prescribes time limitations for air carrier employees.

(7) **Technical Administration** is the system for addressing other aspects of certification and operation, such as key management personnel.

b. **The Air Carrier System Detail** (Figure 1-2, ATOS System / Subsystem / Element Detail Chart, below) identifies each of the systems, sub-systems, and elements (along with associated inspector specialties) in ATOS surveillance planning and execution.

Figure 1-2 - ATOS System / Subsystem / Element Detail Chart

As of 10-01-2001

1.0 AIRCRAFT CONFIGURATION CONTROL				3.1.13	Other Personnel with Operational Control		OP
1.1 Aircraft				3.2 Operational Release			
1.1.1	Aircraft Airworthiness	AW		3.2.1	Dispatch or Flight Release		OP
1.1.2	Appropriate Operational Equipment	AW	OP	3.2.2	Flight / Load Manifest / W & B Control		OP
1.1.3	Special Flight Permits	AW		3.2.3	MEL / CDL Procedures		OP
1.2 Records and Reporting Systems				**4.0 PERSONNEL TRAINING AND QUALIFICATIONS**			
1.2.1	Airworthiness Release / Log Book Entry	AW		4.1 Maintenance Personnel Qualifications			
1.2.2	Major Repairs and Alterations	AW		4.1.1	RII Personnel	AW	
1.2.3	Maintenance Log / Recording Requirements	AW		4.1.2	Maintenance Certificate Requirements	AW	
1.2.4	MIS Reports	AW		4.2 Training Program			
1.2.5	Mechanical Reliability Reports (MRR)	AW		4.2.1	Maintenance Training Program	AW	
1.2.6	Aircraft Listing	AW		4.2.2	RII Training Requirements	AW	
1.3 Maintenance Organization				4.2.3	Training of Flight Crewmembers		OP
1.3.1	Maintenance Program	AW		4.2.4	Training of Flight Attendants		OP
1.3.2	Inspection Program	AW		4.2.5	Training of Dispatchers		OP
1.3.3	Maintenance Facility/Main Maintenance Base	AW		4.2.6	Training of Station Personnel		OP
1.3.4	RII	AW		4.2.7	Training of Check Airman & Instructors		OP
1.3.5	MEL / CDL / Deferred Maintenance	AW		4.2.8	Simulators / Training Devices	AW	OP
1.3.6	AD Management	AW		4.2.9	Outsource Crew Training		OP
1.3.7	Outsource Organization	AW		4.2.10	Aircrew Designated Examiner		OP
1.3.8	Control of Calibrated Tools/Test Equipment	AW		4.2.11	Training of Flight Followers		OP
1.3.9	Engineering / Major Repairs / Alterations	AW		4.3 Crewmember and Dispatch Qualifications			
1.3.10	Parts/Material Control / SUP	AW		4.3.1	Pilot Ops Limitations / Recent Experience		OP
1.3.11	Continuous Analysis & Surveillance (CAS)	AW		4.3.2	Airman / Crew Checks & Qualifications		OP
1.3.12	SFAR36	AW		4.3.3	Advanced Qualification Program (AQP)		OP
1.3.13	Designated Alteration Station (DAS)	AW		4.4 Mechanics and Repairmen Certification			
1.3.14	General Maintenance Manual or Equivalent	AW		4.4.1	Recency of Experience	AW	
1.3.15	Reliability Program	AW		4.4.2	Display of Certificate	AW	
1.3.16	Fueling	AW		4.4.3	A & P Privileges & Limits	AW	
1.3.17	Weight and Balance Program	AW		4.4.4	Repairmen Privileges & Limits	AW	
1.3.18	De-Icing Program	AW		**5.0 ROUTE STRUCTURES**			
1.3.19	Lower Landing Minimums	AW		5.1 Approved Routes and Areas			
1.3.20	Engine Condition Monitoring	AW		5.1.1	Line Stations (Service & Maintenance)	AW	
1.3.21	Parts Pooling	AW		5.1.2	Weather Reporting / SAWRS	AW	
1.3.22	Parts Borrowing	AW		5.1.3	Non-Federal NAVAIDs	AW	
1.3.23	Short-term Escalations	AW		5.1.4	Altimeter Setting Sources	AW	
1.3.24	CASE	AW		5.1.5	Station Facilities		OP
1.3.25	(Reserved)	AW		5.1.6	Use of Approved Routes, Areas and Airports		OP
2.0 MANUALS				5.1.7	Special Navigation Areas of Operation		OP
2.1 Manual Management				5.1.8	ETOPS	AW	OP
2.1.1	Manual Currency	AW	OP	5.1.9	RVSM Authorization	AW	OP
2.1.2	Content Consistency Across Manuals	AW	OP	**6.0 AIRMAN AND CREW FLIGHT, REST, AND DUTY TIME**			
2.1.3	Distribution	AW	OP	6.1 Airman and Crewmember Limitations			
2.1.4	Availability	AW	OP	6.1.1	Scheduling / Reporting System		OP
2.1.5	Supplemental Ops Manual Requirements	AW	OP	6.1.2	Flight Crewmember Flight / Duty / Rest Time		OP
3.0 FLIGHT OPERATIONS				6.1.3	Flight Attendant Duty / Rest Time		OP
3.1 Air Carrier Programs and Procedures				6.1.4	Dispatcher Duty / Rest Time		OP
3.1.1	Passenger Handling		OP	6.2 Maintenance Personnel			
3.1.2	Flight Attendant Duties / Cabin Procedures		OP	6.2.1	Maintenance Duty Time	AW	
3.1.3	Airman Duties / Flight Deck Procedures		OP	**7.0 TECHNICAL ADMINISTRATION**			
3.1.4	Operational Control		OP	7.1 Key Personnel			
3.1.5	Carry-On Baggage		OP	7.1.1	Director of Maintenance	AW	
3.1.6	Exit Seating		OP	7.1.2	Chief Inspector	AW	
3.1.7	De-Icing Program		OP	7.1.3	Director of Safety	AW	OP
3.1.8	Carriage of Cargo		OP	7.1.4	Director of Operations		OP
3.1.9	Aircraft Performance Operating Limits		OP	7.1.5	Chief Pilot		OP
3.1.10	Lower Landing Minimums		OP	7.1.6	Maintenance Control	AW	
3.1.11	Computer Based Record Keeping		OP	7.2 Other Programs			
3.1.12	HAZMAT / Dangerous Goods Program		OP	7.2.1	Safety Program (Ground and Flight)		OP

129. SAFETY ATTRIBUTES. These are ATOS identified safety attributes that should be present in well-designed air carrier systems. These attributes are critical to ATOS certification and surveillance processes. The six safety attributes are:

a. **Responsibility.** There is a clearly identifiable, qualified, and knowledgeable person who is accountable for the quality of a process.

b. **Authority.** There is a clearly identifiable, qualified, and knowledgeable person with the authority to set up and change a process.

c. **Procedures.** There are documented methods for doing a process.

d. **Controls.** There are checks and restraints designed into a process in order to get a desired result.

e. **Process Measurement.** The air carrier measures and assesses its processes to identify and correct problems or potential problems.

f. **Interfaces.** The air carrier identifies and manages the interactions between processes.

130. ATOS SURVEILLANCE IMPLEMENTATION PROCESS. ATOS includes two types of inspections: Safety Attribute Inspections (SAI) and Element Performance Inspections (EPI). The SAI and EPI, as well as their related Data Collection Tools, are described in Chapter 4.

a. **Safety Attribute Inspections.** SAI are the ATOS inspections that assess the safety attributes associated with each system element for an air carrier. SAI are planned at the sub-system level and performed by a team of inspectors. SAI data collection tools should be used as a reference when Principal Inspectors (PI) consider air carrier program changes or approvals. Using these tools ensures both regulatory compliance and inclusion of safety attributes in air carrier programs.

b. **Element Performance Inspections.** EPI are the ATOS inspections that determine that the air carrier follows its written procedures and controls and meets its established performance measures for each system element. EPI are planned for and executed at the element level. EPI are done by individual inspectors.

131. ATOS PROCESS FEEDBACK AND CONTINUOUS IMPROVEMENT. In order for ATOS to work as an effective oversight system, there must be an effective feedback loop. Inspectors should submit their concerns or recommendations using the Problem Reporting and Feedback feature in ATOS automation.

132. SYSTEM PROCESS AUDIT. The System Process Audit Program Staff (AFS-40) reports directly to the Director of Flight Standards Service (AFS-1). The audits will focus solely on the processes, not on the individuals who use the processes. Individual performance issues are not within the scope of the AFS-40 role. Audit results will be provided only to AFS-1 and the ATOS CMO.

133. - 144. Reserved.

SECTION 3. ATOS SYSTEM CONFIGURATION

145. INTRODUCTION. Two major processes establish and maintain the infrastructure needed to conduct surveillance and manage the certificate. These two processes are System Configuration and Surveillance Resource Management. The System Configuration process consists of the planning and management that happens before, during, and after certification. These activities include:

- Developing and maintaining national certification baseline standards;
- Establishing the infrastructure for new entrant certification;
- Maintaining and managing certificates; and
- Before certification, making sure that the Certificate Management Team is established and functional.

146. OBJECTIVE. This section defines the policies and procedures for the baseline staffing and training requirements of ATOS.

147. RESPONSIBILITY. The assigned roles and responsibilities for System Configuration are described below:

a. **Director of Flight Standards Service, AFS-1** provides and maintains national policy and guidance for CMT baseline training and staffing standards. AFS-1 also provides adequate regional resources to support ATOS processes.

b. **AFS-900** completes changes and updates for the system configuration process**.**

c. **AFS-500** budgets for and ensures that the training needs are provided for configuration management.

d. **Regional Offices** allocate training and staffing resources to support ATOS processes.

e. **Certificate Holding District Office (CHDO) / Certificate Management Office (CMO)** provides the air carrier specific familiarization portion of baseline training to all CMT members. The CHDO/CMO Manager receives input from the principal inspectors (PI) and identifies other training needs for CMT inspectors. The Office Manager determines and requests staffing, as well as requests baseline training to support ATOS processes. The Office Manager also notifies the PI and Data Evaluation Program Manager (DEPM) of any changes in CMT staffing.

f. **Flight Standards District Office Manager** notifies the CHDO/CMO manager in writing if inspectors will not be able to complete assigned work plans, and of any changes that would affect the CMT roster. Changes to geographic inspectors assigned to a CMT must be coordinated in writing at least 30 days before any change with the affected CHDO/CMO and Region(s). FSDO Managers request through their regions the staffing and baseline training of assigned geographic inspectors to support CMT.

g. **Principal Inspector (PI)** reviews any changes to CMT staffing and training to determine if they affect the Comprehensive Surveillance Plan (CSP).

h. **Data Evaluation Program Manager (DEPM)** maintains a CMT roster that accurately reflects the active CMT membership. When notified by the CHDO/CMO Manager, the DEPM will

designate a CMT member as inactive when they are no longer assigned to the CMT or unable to complete their assigned work plans. The DEPM also makes all changes to the CMT Roster when notified to do so by the CHDO/CMO manager.

i. **CMT Members** notify the DEPM of any change to their personal information (phone number, FAA e-mail address, or name change) that affects the CMT roster.

148. POLICY AND PROCEDURES. The System Configuration process includes common infrastructure management activities, like developing and maintaining the staffing standards and training standards. These activities are vital to effective certification, certificate management, and surveillance. The following describes the System Configuration tasks required:

a. **Develop and Maintain Baseline Staffing Requirements.** The specific procedures for developing and maintaining National Certification Baseline Staffing Standards have not been developed in ATOS Phase 1. Certificate Management Teams include the following:

(1) **CHDO/CMO Managers and Supervisors.**

(2) **Principal Operations Inspector (POI), Principal Maintenance Inspector (PMI), and Principal Avionics Inspector (PAI).** Each Principal may have one or more Assistant Principals.

(3) **Cabin Safety Inspector (CSI).** At least one CSI is assigned to each CMT and is located at the CHDO/CMO.

(4) **Data Evaluation Program Manager (DEPM).** One DEPM is assigned to each CMT and is located at the CHDO/CMO. The DEPM reports to the first line supervisor above the PI. The DEPM must be qualified as an air carrier inspector.

(5) **Operations Research Analyst (ORA).** One analyst is assigned to each CMT and is located at the CHDO/CMO. The Analyst reports to the CHDO/CMO Manager.

NOTE: Vacancies in the above CMT positions may not go unfilled. Personnel should be named to act in required positions.

(6) **Aviation Safety Inspectors (ASI)** located at the CHDO/CMO. All ASI assigned to the air carrier certificate are members of the CMT.

(7) **Geographic Aviation Safety Inspectors (ASI-G)** are assigned to only one CMT. Continental United States, Regional, or FSDO boundaries do not restrict conducting SAI and EPI. Geographic Inspectors shall not be restricted to conducting surveillance during regular office hours.

(8) **Aviation Safety Technician (AST).** If AST are assigned to the air carrier certificate, then they are members of the CMT.

(9) **Aviation Safety Assistant (ASA).** If ASA are assigned to the air carrier certificate, then they are members of the CMT.

(10) **Certification, Standardization, and Evaluation Team.** For 5 years after certification, CSET representatives act as members of CMT that are established for new entrant air carriers.

b. **Develop and Maintain Baseline Training Requirements.** An individual may be assigned to a CMT before receiving "Baseline Training." However, CMT members cannot be assigned or perform SAI or EPI until they have received the baseline training. The baseline training requirements for all aviation safety inspectors assigned to a CMT include:

(1) All courses of all phases of the initial or transition air carrier training string for the inspector's specialty,

(2) ATOS Training Course, and

(3) The Initial and Recurrent Air Carrier Specific Familiarization Briefing. Additional guidance and a standard curriculum are contained in Figure 1-3, Air Carrier Specific Familiarization Briefings, at www.faa.gov /avr/afs/8400/Appendix6/fig1-3.pdf.

c. **Other Training.** All CMT operations inspectors shall be programmed to receive initial and recurrent training in an aircraft type operated by their assigned air carrier. All CMT airworthiness inspectors shall be programmed to receive initial systems training appropriate to their avionics or maintenance specialty in an aircraft type operated by their assigned carrier.

d. **Establish New Entrant System Configuration.** CSET assists in developing the configuration requirements to support certification of new entrant air carriers, and assists CHDO/CMO in certificating them, using a system safety approach.

149. CONTROLS. The controls built into the System Configuration process are described below:

a. Principal inspectors verify that CMT inspectors have completed baseline training before including them in the Inspector Work Plan developed from the CSP.

b. Supervisors verify that the CMT inspectors they supervise have completed baseline training before assigning SAI or EPI to those members.

c. Before sending the air-carrier-operating certificate to the region to sign, both the CHDO/CMO manager and CSET representative must agree that an adequately staffed CMT has been established.

d. Automation controls verify that an inspector who is reporting SAI and EPI data is a member of the CMT assigned to the air carrier under surveillance.

150. PROCESS MEASURES. The process measures used to confirm the success of the system Configuration process are described below:

a. The CMT baseline training profile requirements are met.

b. The CMT baseline staffing requirements are met. These positions are continuously filled, using temporary assignments where necessary.

151. INTERFACES. The System Configuration process interfaces with the Certificate Management process and the Surveillance Resource Management process, so that the CMT has the supporting resources and training necessary to plan for and implement the CSP.

152. - 199. RESERVED

APPENDIX 6. Air Transportation Oversight System

CHAPTER 2. CERTIFICATE MANAGEMENT

201. INTRODUCTION. The Certificate Management process provides the Certificate Management Team (CMT) with a structure for using risk management to develop a dynamic Comprehensive Surveillance Plan (CSP) for the air carrier.

a. **Role of CMT.** The CMT identifies potential system deficiencies by analyzing the air carrier's systems, sub-systems, and elements. This risk management approach allows the CMT to dynamically target and retarget surveillance toward identified risks throughout the plan year.

b. **Certificate Management Process.** The Certificate Management Process makes the surveillance of air carriers more systematic and targeted to deal with identified hazards and risks.

c. **Related Publications.** Guidance for certificate management work functions other than surveillance (e.g., issuance of Operations Specifications, approval of Minimum Equipment Lists (MEL) is included in the Inspectors' Handbooks, other FAA Orders and Advisory Circulars.

202. OBJECTIVE. This chapter provides the policies and procedures for the surveillance planning process. It also clarifies the roles and responsibilities of CMT members in developing the surveillance plan.

203. RESPONSIBILITY. The responsibilities for surveillance planning are identified below:

a. **Director of Flight Standards Service, AFS-1** provides and maintains national policy and guidance for Flight Standards Surveillance Programs. AFS-1 also provides adequate resources to support the certificate management process.

b. **AFS-900** provides analytical, automation, and program support for the certificate management process.

c. **Regional Offices** provide resources to support the certificate management process, including surveillance planning and retargeting meetings.

d. **Certificate Holding District Office (CHDO/CMO) Manager** has the overall responsibility for the certificate management process. The Manager is specifically responsible for making sure that the CMT develops and manages a comprehensive surveillance plan that is targeted to identified risks. The Manager participates in the annual planning meeting and concurs with the completed surveillance plan.

e. **Flight Standards District Office Managers** support the CMT and make sure that assigned inspectors participate in annual surveillance planning meetings.

f. **First-Level Supervisor of the Principal Inspectors** assigns a coordinator for the annual planning meeting.

g. **Principal Inspectors (PI)** are responsible for the certificate management process and perform the following functions:

(1) Help the CMT Meeting Coordinator prepare for the annual surveillance planning meeting.

(2) Collect and organize information to complete an air carrier assessment, solicit input from team members, and make decisions about surveillance requirements.

(3) Identify the required inspectors for planned inspections and provide specific instructions for completing those inspections.

(4) Determine when plan retargeting is required based on analysis of the air carrier or other triggers such as accidents, incidents, or occurrences.

(5) Monitor and track progress of the CMT in completing the CSP.

h. **Certificate Management Team Coordinator** helps the principal inspectors organize the annual surveillance planning meeting.

i. **Cabin Safety Inspector.** The Cabin Safety Inspector (CSI) is responsible to participate fully in the planning activities to develop the annual and any retargeted CSP. With respect to their technical specialty area, they have joint responsibility with the POI to approve and submit the Air Carrier Assessment Tool (ACAT).

j. **Aviation Safety Inspectors.** All CMT ASI, including the DEPM and any CSET representatives are responsible to participate fully in the planning activities to develop the annual and any retargeted CSP.

k. **Analyst.** The Analyst is responsible for collecting, analyzing and organizing associated air carrier data to complete surveillance planning and retargeting tasks. The analyst should work closely with the PI to ensure a thorough review of all pertinent data.

204. POLICY AND PROCEDURES. The following describes the Certificate Management tasks required to plan for surveillance. See Figure 2-1, ATOS Surveillance Planning Guidelines, at www.faa.gov/avr/afs/8400/Appendix6/fig2-1.pdf for additional guidance.

a. **Prepare for Annual Surveillance Planning Meeting.**

(1) **Designate CMT Meeting Coordinator.** Before any preparation for the annual surveillance planning meeting begins, the first-level supervisor to whom the PI report, designates a member of the CMT as coordinator. The supervisor makes this decision based on input from the PI. The CMT Coordinator provides the organizational skills required for the CMT to work effectively as a team during the annual meeting.

(2) **Pre-meeting Planning.** Planning for the meeting should start early. The CMT Coordinator and the PI define the roles and responsibilities for planning and conducting the meeting. They also determine:

(a) Task requirements,

(b) Date, time and location,

(c) Logistics,

(d) Materials to be developed,

(e) Meeting objectives,

(f) Activities during the meeting,

(g) Products to be developed,

(h) Facilitators and Recorders,

(i) Audiovisual and computer Equipment needed,

(j) Internet access, and

(k) On site meeting responsibilities of all CMT members.

(3) **Planning Session.** The CMT Coordinator and the PI should have a planning session with the office manager to review the final arrangements for the meeting and make sure it meets the specific needs of the CMT. Ideally, the meeting location should have a large room to accommodate the entire CMT as well as one or more breakout rooms for sub-group planning sessions. The CMT Coordinator must notify CMT members of the meeting date and other logistics as early as possible.

(4) **Agenda and Logistics.** The CMT Coordinator with input from the PI develops the meeting agenda, makes the logistical arrangements, and obtains other materials and equipment required to effectively conduct the meeting.

(5) **Meeting Organization.** The CMT Coordinator and PI decide how to organize the CMT into sub-groups (e.g., by specialty or by system/sub-system/element) so they can effectively accomplish the meeting objectives. Because the ACAT and CSP are organized by specialty, the minimum requirements are to have a sub-group for Operations and one for Airworthiness. However, integration of specialties within sub-groups is highly recommended to provide a diversity of experience and knowledge. Below is an example of how to divide into sub-groups:

(a) After the entire CMT meets together, they can divide into an Operations group (Operations and Cabin Safety CMT members) and an Airworthiness group (Avionics and Maintenance CMT members).

(b) Each Operations and Airworthiness group could then be divided into sub-groups by Systems or Sub-Systems.

(6) **Written Critique Forms.** The CMT Coordinator will provide written critique forms (participant name optional) to each participant at the CSP meeting to aid the CMT in continuous improvement of its planning efforts.

b. **Collect Appropriate Information for the Air Carrier Assessment Tool (ACAT).** The purpose of this process is to gather and evaluate the information needed for analysis and assessment of the air carrier. This data, along with the knowledge gained through certificate management experience for the assigned air carrier, should prepare the PI and CSI for the next step in the surveillance planning process.

(1) **Access Policy and Guidance Information.** With the help of the Analyst and other CMT members, the PI and CSI access policy and guidance information, external information such as air carrier and industry data, surveillance queries, and other internal FAA databases and analytic data. This information collection activity should start well in advance of the annual surveillance planning meeting.

(2) **Sources of Information.** The following sources of information should be accessed:

(a) ATOS data repository

(b) Safety Performance Analysis System (SPAS) which uses data from a variety of sources to compare the current-to-past performance of an air carrier to its own record or to the average performance of the entire industry segment in which an air carrier is categorized.

(c) Program Tracking and Reporting Subsystem (PTRS).

(d) Automated Operation Specifications Sub-system (OPSS).

(e) Vital Information Subsystem (VIS).

(f) Integrated Safety Information System (ISIS).

(g) Service Difficulty Reporting Sub-system (SDR).

(h) Monthly Air Carrier Utilization and Propulsion Reliability Sub-system.

(i) Airworthiness Directive Sub-system.

(j) Team Evaluation Reports.

(k) Information gathered by the air carrier (e.g. CAS, Reliability reports, internal audits).

(l) External information gathered from industry and the Original Equipment Manufacturer.

c. **Using the Air Carrier Assessment Tool (ACAT).** The PI and the CSI use the air carrier and statistical data to complete draft versions of the ACAT following the instructions contained in Figure 2-2, Air Carrier Assessment Tool (ACAT) at www.faa.gov /avr/afs/8400/Appendix6/fig2-2.pdf, and the ATOS Automation User Guide.

(1) **Description of ACAT.** The ACAT is an automated tool that allows the CMT to analyze and assess the elements of an air carrier's systems using a series of risk indicators. The results of this assessment establish initial and retargeted surveillance baselines for the air carrier.

(2) **Purpose of ACAT.** The purpose of the ACAT is to determine an assessment value. That value is used to increase, decrease, or maintain the inspection frequency for each element contained in the CSP.

(3) **Air Carrier Complexity Factor.** An air carrier complexity factor considers the size and complexity of the carrier to determine the baseline number of EPI that the ACAT generates in the CSP. Current ATOS carriers will be grouped into one of three categories. Each of these categories will have its own weighting factor to determine the number of EPI to be accomplished within the CSP.

(4) **Risk Indicators.** The ACAT uses risk indicators to assess the elements. The risk indicators are divided into two major categories – System Stability and Operational Risks. Each of the categories is divided into two subject areas.

(a) *System Stability: Operational Stability.* This subject area refers to organizational and environmental factors that the air carrier cannot directly control, but can manage effectively in order to improve system stability and safety.

(b) System Stability: Air Carrier Dynamics. This subject area refers to the organizational and environmental factors that

the air carrier can directly control to improve system stability and safety.

(c) *Operational Risks*: *Performance History.* This subject area measures the results of the air carrier's operations over time.

(d) Operational Risks: Environmental Criticality. This subject area refers to those aspects of the air carrier's surroundings that may lead to or trigger a failure in one of their systems, sub-systems, or elements with the potential of creating an unsafe condition.

d. **Completing the draft Air Carrier Assessment Tool (ACAT).** The following tasks are required to complete the draft ACAT.

(1) **Mark Risk Indicator Columns.** The PI/CSI complete their sections of the ACAT by marking a check in one or more of the risk indicator columns for each element where there is a concern that a problem or potential problem could contribute to a failure in that program or process. The PI should enter notes to explain why the check marks were made. Because the ACAT is designed from a system perspective, it is recommended that the tool be completed on an element-by-element and row-by-row basis for each of the risk indicators. The PI/CSI can do this at one sitting, or they may need to return more than once to review the previously gathered data and the definitions of the risk indicators.

(2) **Saving the ACAT as "Work-in-Progress" or "Draft."** The POI and CSI complete the draft Operations ACAT. The PMI and PAI complete the draft Airworthiness ACAT. While preparing the draft in ATOS automation, the ACAT status is "Work in Progress," and can be accessed only by the PI. Once the PI saves the ACAT as a "Draft," it is available for review by all CMT members. Also, when the ACAT is saved as "Draft," a draft CSP is also produced based on the draft ACAT and is accessible to the PI.

(3) **CMT Member Comments on ACAT.** After saving the ACAT as "Draft," the PI notify all CMT members that it is available for review. CMT members cannot change the check marks made by the PI, but they may enter comments on the draft in a dedicated comment field. The comments are accessible to all CMT members.

(4) **Revisions to Draft ACAT based on CMT member Comments.** After considering all comments made by CMT members, the PI revise the draft ACAT, if necessary, prior to the annual surveillance planning meeting. The PI brings the revised draft versions of the tool to the annual surveillance planning meeting for review and discussion by the appropriate CMT sub-groups.

e. **Annual Surveillance Planning Meeting Activities.** The annual surveillance planning meeting is typically held during the fourth quarter of each fiscal year. The primary purpose of this meeting is to finalize the ACAT and the CSP. Other important goals for this meeting include:

- Building and improving team skills;
- Establishing team norms;
- Communicating CMT expectations; and
- Sharing information.

(1) **Coordination and Communication.** The CMT must determine how they are going to communicate, because all team members are not located in the same place. It may be difficult for them to meet together as a total team more than once a year. Coordination and communication are key ingredients in building and maintaining

a strong team environment, and are critical to the CMT's success. The CHDO/CMO Manager is responsible for making sure that the CMT members understand their roles and responsibilities.

(2) **Attendance at Annual Planning Meeting.** All CMT members attend this annual meeting. Some members of the CMT may be required to meet more often if they need to retarget planned surveillance or to collaborate on other oversight issues.

(3) **Structure and Format of Meeting.** The structure and format of the annual surveillance planning meeting varies by CMT. The meeting should be planned for a minimum of three days to communicate overall CMT goals, expectations, and tasks as well as to develop the CSP. Team building is vital to conducting this meeting.

(4) **Written Meeting Summary and Critiques.** After the surveillance planning meeting, the CMT Coordinator compiles a written meeting summary covering the questions, comments, and concerns about the surveillance planning process voiced by CMT members. This information is essential to continuous improvement and should be forwarded to the ATOS CMO within 30 days following the meeting conclusion. The CMT should forward a copy of the completed critiques to the ATOS CMO, along with the written meeting summary.

f. **Finalize the Air Carrier Assessment Tool.** After the preliminary meeting activities, the CMT is divided into Airworthiness and Operations sub-groups. The PI and CSI brief their sub-groups about the air carrier information collected before the meeting and the comments received from CMT members on the draft ACAT. This information supports the sub-group's decision making.

(1) **Review Draft ACAT in Sub-groups.** Each sub-group then reviews the appropriate draft version of the ACAT. The review process should allow for all sub-group members to share information and provide input in order to finalize the tools. Once the sub-group review is complete, the PI/CSI may or may not choose to modify the draft version based on the sub-group's input. The PI/CSI make any desired adjustments and review them for completeness.

(2) **Review of Other Specialties' ACAT.** Before saving the ACAT as "Final," the POI/CSI should review the completed draft version of the Airworthiness ACAT and the PMI/PAI should review the completed draft of the Operations ACAT. This provides an opportunity to gain knowledge from a complete assessment of the air carrier. This information sharing may result in some adjustment to the ACAT before they are finalized, particularly for elements that involve both operations and airworthiness specialties.

(3) **Saving the ACAT as Final.** The PMI, PAI, POI, and CSI are responsible for saving the ACAT as "Final." The ACAT Assessment Values are transferred through automation to the appropriate columns on the draft CSP.

g. **Develop the CSP.** The CSP documents the planned annual surveillance for the air carrier at the element level. The CMT uses the ACAT results to compile a surveillance plan specific to each air carrier. The CSP is a dynamic plan that can be changed any time the CMT determines retargeting is required.

(1) **Description of CSP.** The CSP is an automated tool that lists the air carrier surveillance elements and is divided into SAI and EPI for Operations and Airworthiness. The

ATOS Automation User Guide and Figure 2-3, Comprehensive Surveillance Plan (CSP) for Safety Attribute Inspections (SAI), and Figure 2-4, Comprehensive Surveillance Plan (CSP) for Element Performance Inspections (EPI), at www.faa.gov/avr/afs/8400/Appendix6 /fig2-3.pdf and fig2-4.pdf, include specific instructions and examples of the CSP-SAI and the CSP-EPI.

(2) **Identify and Record Surveillance Requirements.** Both Operations and Airworthiness specialties must complete the CSP. The PI identify and record the surveillance requirements for each specialty. If an element does not apply to a particular type of operator (e.g., 2.1.5 Supplemental Operations Manual for an air carrier not approved to conduct those operations), then the PI disregards the EPI Minimum Frequency, Initial Plan EPI, and Current Plan EPI column entries and selects "Element Not Applicable." The associated Record IDs that are automatically generated will remain unassigned. Figure 2-1 at www.faa.gov/afs/avr /afs/8400/Appendix6/fig2-1.pdf contains specific guidelines on planning SAI and EPI that should be followed by all CMT.

(3) **Identifying Inspectors to Accomplish Specific Inspections.** To help the PI identify appropriate individuals for each inspection, CMT members may provide their Employee Training History to the PI. CMT members can get this report from their administrative officer. Because this report contains privacy act information, the submission of the report to the PI is strictly optional. PI may also access the PTRS Inspector Resource Data Base (IRDB) to review CMT member qualifications and background.

(4) **PI Instructions.** Principal Inspectors should provide specific inspection instructions to ensure that inspection activities are performed at appropriate locations and at appropriate times to answer the questions on the data collection tool in a reasonably short timeframe. Instructions help the PI prioritize inspections and set timelines for starting and completing the activities. Instructions should include guidance on the type, location, and timing of inspection activities. The PI may request that the activities take place at specific locations or involve specific makes/models.

(5) **Resources not Available.** If the PI determine that there is insufficient CMT staffing to accomplish all inspections in the CSP, they elevate the issue via a memo to their regional office through the CHDO/CMO Manager for resolution. The regional office, in coordination with other regional offices, secures the necessary CMT staffing. If the regional office of the CHDO/CMO cannot get additional CMT staffing, they elevate the issue via a memo to AFS-1 for resolution. If the required resources are not provided, and reallocation of work requests necessary to accomplish the CSP is not possible, the PI selects "Resource Not Available." Inspections designated as "Resource Not Available" remain in the CSP as planned but unassigned.

(6) **Saving CSP as "Final."** Once the PI have completed their appropriate parts of the CSP, they review the CSP and save it as "Final."

(7) **Manager Concurrence.** The CHDO/CMO Manager for the CMT reviews and concurs with final CSP.

h. **Submit Inspector Work Plans for Manager Review.** After the CSP is finalized and acknowledged, the PI generate each Inspector's Work Plan. These Inspector Work Plans are provided to the Inspector's Manager through automation. The Automation User Guide contains detailed information about how this process works. The inspector's manager

reviews the Inspector Work Plan to determine if the resources to support it are available and adequate. Further guidance is included in Chapter 3 of this Appendix.

i. **Retarget Surveillance.** The purpose of this process is to give the CMT a way to change the CSP and dynamically retarget surveillance at any time after the initial annual planning cycle.

(1) **Determining the need to Retarget.** Throughout the year, the CMT collects, reviews, reports on, and analyzes surveillance data. If surveillance data identifies a problem or other external events trigger an issue, the CMT must assess the information to decide if retargeting is needed.

(2) **Completing a new ACAT.** The PI must assess applicable elements of the ACAT and generate a new version. This can be done for the entire air carrier or for selected systems, sub-systems, or elements. The end result of this process is an adjustment of the CSP.

(3) **Completing a new version of the CSP.** A new version of the CSP is completed, following the instructions for retargeting in Automation User Guide. After the retargeted plan is saved as "Final," the PI follows the procedures outlined in Paragraph g (above) for submitting the revised Inspector Work Plans.

NOTE: The new version of the CSP should be finalized as soon as possible because inspectors are unable to report on inspections while retargeting is in progress.

j. **Maintenance of the CMT Roster.** Information Systems Security requirements limit access to the ATOS data repository based on each employee's assigned roles and responsibility. This is accomplished in the CMT Rosters. The following procedures are followed when CMT roster information needs to be changed:

(1) **The ATOS CMO** adds or deletes CHDO/CMO Managers, Principal Inspectors, CSI, DEPM, and ORA in the CMT roster when notified to do so by the CHDO/CMO Manager.

(2) **The CHDO/CMO Manager** notifies the Principal Inspector and the DEPM of any change in CMT personnel resources.

(3) **The FSDO Manager** notifies the CHDO/CMO Manager when an inspector is no longer assigned to the CMT, reports to a new supervisor, or is unable to complete his/her assigned inspector work plans.

(4) **The Principal Inspector** determines if there will be any effect on the CSP when notified that an inspector is no longer available or unable to complete his/her assigned work plans.

(5) **CMT Members** notify the DEPM about any of the following changes in their CMT roster information:

- E-mail address changes.
- Telephone number changes.
- Name changes.

(6) **The DEPM** makes the changes to CMT roster as directed by the CHDO/CMO Manager or the CMT Member. DEPM will designate members as inactive when they are no longer assigned to the CMT or unable to complete their assigned work plans.

k. **Access to the ATOS Data Repository.**

(1) **Record Inspection Data.** Only active CMT members can be selected to

accomplish SAI or EPI and record inspection data.

(2) **ACAT Saved as "Work-in-Progress."** Only the PI and CSI can access an ACAT saved as "Work in Progress."

(3) **Draft ACAT and CSP.** All CMT members can read a "Draft" ACAT and enter text in the comment field. Draft CSP (read-only) are also available for all CMT members to review.

(4) **Final ACAT and CSP for a specific air carrier.** "Final" ACAT and CSP for their assigned carrier are available in a read-only version to all CMT members.

(5) **Final ACAT and CSP for all air carriers.** "Final" ACAT and CSP for all air carriers are available in a read-only version to AFS-900 (FSAIC and ATOS CMO).

(6) **Final CSP for all air carriers.** "Final" CSP for all air carriers are available in a read-only version to regional and headquarters Flight Standards employees who have authorized access.

205. CONTROLS. The controls built into the Certificate Management process are listed below:

a. The team-based approach provides synergy as well as checks and balances.

b. CMT staffing shortfalls are documented in writing.

c. Geographic Inspectors do not report to the CHDO/CMO.

d. The *"Assessment Value"* from the ACAT is automatically transferred to the *"Assessment Value"* column on the CSP.

e. The *"Weighted Percentage"* from the ACAT is automatically transferred to the *"SAI Priority"* column on the CSP.

f. When retargeting, automation requires an assessment of the ACAT before the CSP can be accessed.

g. Automation maintains an active/inactive roster of CMT members. Only active members may enter inspection data.

h. Automation ensures that only CMT members from the CMT Roster may be selected to accomplish SAI or EPI.

i. Only authorized personnel can change the CMT roster.

j. Automation ensures that the *"Current Plan EPI"* are equal to or greater than *"EPI Minimum Frequency."*

k. Automation ensures that for established air carriers the *"EPI Minimum Frequency"* cannot be less than annually.

l. Automation ensures that for new entrant air carriers the *"EPI Minimum Frequency"* cannot be less than the *"EPI Frequency Baseline."*

m. Automation ensures that only PI can establish or modify the CSP.

n. CSET participates in the surveillance planning process for new entrant air carriers.

206. PROCESS MEASURES. The process measures used to confirm the success of the Certificate Management process are listed below:

a. The annual surveillance planning meeting was conducted and met its objectives,

according to written critiques completed by each participant.

b. The Annual CSP was finalized and the Inspector Work Plans were forwarded to the appropriate managers before the start of the plan year.

c. Retargeting occurred throughout the plan year, as shown by revised versions of the ACAT and CSP.

d. CMT rosters accurately reflect the current information for all CMT members.

207. INTERFACES. The Certificate Management process interfaces with the System Configuration process, the Analysis process, the Implementation process, and the Surveillance Resource Management process.

a. The System Configuration process provides the CMT members for the Certificate Management process.

b. The Analysis process provides the data necessary to plan inspection activities in the Certificate Management process.

c. The Implementation (Action) process provides retargeting requirements to the Certificate Management process.

d. The Certificate Management process provides the Surveillance Resource Management process with the Inspector Work Plans.

208. - 299. RESERVED

APPENDIX 6. Air Transportation Oversight System

CHAPTER 3. SURVEILLANCE RESOURCE MANAGEMENT

301. INTRODUCTION.

a. Surveillance Resource Management is an ongoing process to make sure that there are adequate resources to accomplish the Inspector Work Plans generated from the Comprehensive Surveillance Plan (CSP).

b. **Purpose.** The goal of this process is to make sure that there are adequate resources available at all times to support Inspector Work Plans. By comparing Inspector Work Plans and available resources, managers determine if more resources are needed to support the Inspector Work Plan. Managers also assess needed resources based on any changes relating to implementation and retargeting of the CSP.

302. OBJECTIVE. This chapter provides the policies and procedures for the management of resources to support the CSP.

303. RESPONSIBILITY. Surveillance Resource Management roles and responsibilities are described below.

a. **Director, Flight Standards Service AFS-1**, is responsible for ensuring that adequate resources are available to execute the CSP and resolving resource issues that are elevated by the Regional Offices.

b. **Regional Division Manager.** The Regional Flight Standards Division Managers are responsible for ensuring adequate funding is allocated to the CMT and resolving resource issues that are elevated by the Field Offices.

c. **Office Manager.** Office managers are responsible for obtaining and providing resources to support CSP development and accomplishment and System Analysis Team (SAT) participation described in Chapter 8 of this Appendix. This includes the travel funding.

(1) **Work Priority for CMT Geographic Inspectors.** Accomplishing the SAI and EPI identified in the CSP are the primary work function and highest work priority of CMT geographic inspectors.

(a) **Work Schedule Flexibility.** Office managers must make sure that inspectors have enough flexibility in their work schedules to do these inspections.

(b) **Work Assignments.** Office managers ensure that additional work assignments (e.g., certification, investigation, technical administration, and other surveillance) do not prevent the Inspector from getting the assigned CSP inspections done.

(c) **CSP is only Surveillance Work Program Assigned.** Although additional surveillance work may occasionally be assigned, the inspections identified in the CSP will be the only annual surveillance work program assigned.

(2) **Review of Inspector Work Plans.** Managers are responsible for reviewing Inspector Work Plans to identify any concerns with resource allocation.

(3) **International Surveillance.** The inspector's manager is responsible to start the process of getting an official passport for inspectors when the Inspector Work Plan requires international surveillance.

d. **Principal Inspector**. The PI is responsible for identifying and requesting additional resources to support the CSP.

e. **Aviation Safety Inspector.** Inspectors will comply with established FAA directives for keeping their qualifications and related experience information current in the Inspector Resource Database.

304. POLICY AND PROCEDURES. The Surveillance Resource Management process begins when the CMT develops the CSP and continues throughout the year as changes occur. The tasks for Surveillance Resource Management are described below. See the ATOS Automation User Guide for more information on the automated Inspector Work Plan review process.

a. **Review the Inspector Work Plan.** The CHDO/CMO/FSDO Manager receives the Inspector Work Plan from the PI. The Manager reviews the Inspector Work Plan to identify concerns with the resource availability. During this review, the manager considers scheduled leave, scheduled training, training requirements, and other potential constraints. (See Figure 3-1, Sample Cover Memo for Inspector Work Plan Submittal, at www.faa.gov/avr/afs /8400/ Appendix6/fig3-1.pdf.)

b. **Concur with Inspector Work Plans.** If the resources are adequate to support the Inspector Work Plan, the Manager notifies the applicable PI that the Inspector Work Plan has been reviewed and assigned. This notification is accomplished by selecting the *"Concur"* block on the Memo for Inspector Work Plan Submittal. The Manager returns the memo to the PI and gives a copy to the inspector's immediate supervisor.

c. **Assign Inspector Work Plans.** The inspector's immediate supervisor assigns the work plan to the inspector. Only the PI can change an Inspector Work Plan or redirect any work requests from one CMT member to another.

d. **Non-concurrence with Inspector Work Plans.** If the resources are not adequate to support the Inspector Work Plan, the Manager notifies the applicable PI that the Inspector Work Plan has been reviewed and is not assigned. This notification is accomplished by selecting the *"Non-concur"* block on the Memo for Inspector Work Plan Submittal. The Manager returns the memo to the PI and gives a copy to the inspector's immediate supervisor. Additional actions required by non-concurring FSDO and CHDO/CMO Managers are described in paragraphs e. and f. below.

e. **Additional Actions Required by Non-concurring FSDO Managers of Geographic Inspectors.** If the manager of a geographic inspector reviews that inspector's Work Plan and decides that it cannot be supported, the Manager must send a memo to the CHDO/CMO Manager documenting the reasons for the decision.

(1) **The FSDO Manager** must also send a copy of the memo to the Regional Division Manager of that FSDO.

(2) **The CHDO/CMO Manager** then contacts the FSDO Manager to discuss the memo. They try to resolve the resource issue.

(3) **If the FSDO Manager and the CHDO/CMO Manager cannot resolve the resource issue**, then the CHDO/CMO Manager forwards the memo to the CHDO/CMO's Division Manager. The CHDO/CMO's Division Manager and the FSDO's Division Manager then attempt to resolve the resource issue.

(4) **If the issue cannot be resolved between the Regions**, the CHDO/CMO's Division Manager produces a new memo to further elevate the issue, attaches the original memo, and forwards the package to AFS-1. The CHDO/CMO's Division Manager also sends a copy of this package to the CHDO/CMO. The CHDO/CMO Manager is responsible for tracking and maintaining correspondence relating to the resolution of the resource issue.

(5) **AFS-1 reviews the information** and either provides the requested resources or documents why the resources cannot be provided to accomplish the Inspector Work Plan.

(6) **If the resources are provided**, AFS-1 notifies the PI through the CHDO/CMO's Regional Division Manager and the CHDO/CMO Manager. The CHDO/CMO Manager notifies the FSDO Manager. The assigned inspector is notified by their supervisor that the Inspector Work Plan is in effect.

(7) **If the resources cannot be provided**, the reason is documented and forwarded to the PI through the CHDO/CMO Regional Division Manager and the CHDO/CMO Manager. The PI decides if reallocation of the SAI or EPI Inspector Work Plans to other inspectors is possible. If reallocation of the work is not possible, the inspections remain in the CSP as planned but unassigned. This is done by selecting the *"Resources Not Available"* option.

f. **Additional Actions Required by Non-concurring Managers of CHDO/CMO Inspectors.** If the manager of a CHDO/CMO inspector reviews that inspector's Work Plan and decides that resources are not adequate, the CHDO/CMO Manager must send a memo to their Regional Division Manager documenting the reasons.

(1) **The CHDO/CMO Manager** also contacts the Division Manager to discuss the memo. They try to resolve the resource issue.

(2) **If the issue cannot be resolved at the regional level**, the Division Manager produces a new memo further elevating the issue, attaches the original memo, and forwards the package to AFS-1. The Division Manager also sends a copy of this package to the CHDO/CMO manager. The CHDO/CMO Manager is responsible for tracking and maintaining correspondence relating to the resolution of the resource issue.

(3) **AFS-1 reviews the information** and either provides the requested resources or documents why the resources cannot be provided to accomplish the Inspector Work Plan.

(4) **If the resources are provided**, AFS-1 notifies the PI through the CHDO/CMO's Regional Division Manager and the CHDO/CMO Manager. The assigned inspector is notified by their supervisor that the Inspector Work Plan is in effect.

(5) **If the resources cannot be provided**, the reason is documented and forwarded to the PI through the CHDO/CMO's Regional Division Manager and the CHDO/CMO Manager. The PI decides if reallocation of the SAI or EPI Inspector Work Plans to other inspectors is possible. If reallocation of the work is not possible, the inspections remain in the CSP as planned but unassigned. This is done by selecting the *"Resources Not Available"* option.

g. **Managing Resource Requirements.** Based on changes in CMT assignments and/or modifications to the CSP, Managers need to continually manage both inspector availability and travel funding requirements.

(1) **Changing concurrence with a plan to non-concurrence.** The Manager may decide that the Inspector Work Plans cannot be accomplished. The Manager notifies the applicable PI immediately to discuss any concerns about getting the work done. The PI contacts the appropriate parties to resolve the resource issue. If necessary, the PI forwards the resource issue through the process identified in the previous sections.

(2) **Incomplete Inspection Records resulting from an ASI leaving the CMT.** Managers are responsible to ensure that when an ASI is leaving the CMT all inspection records are finalized for the evaluation process prior to the ASI departure. If for some reason the ASI cannot complete the items that are in progress and leaves the CMT, the Manager is responsible for coordinating with the ATOS CMO for resolution of the incomplete inspection records.

(3) **Identifying Additional Training Requirements.** When the PI identifies additional training requirements are needed for CMT members to support the CSP, the PI forwards a request to the inspector's manager following the established policies for training requests. This request is made using the prescribed form and must include the rationale for the request. If the inspector's manager denies the request, then the inspector's manager must respond to the PI with a memo explaining why the request was denied.

(4) **Identifying Additional Staffing Requirements.** If the manager needs additional permanent or temporary staff for the CMT, then the manager should follow current FAA policies and procedures for obtaining those individuals.

305. CONTROLS. The controls built into the Surveillance Resource Management process are described below:

a. PI will not request and supervisors will not assign inspectors to conduct an inspection unless the baseline training requirements are met.

b. No one can change the planned inspections in the CSP because of a lack of resources.

c. Only the PI can redirect work requests from one CMT member to another.

d. CMT staffing shortfalls and additional

training needs are documented in writing.

306. PROCESS MEASURES. The process measures used to confirm the success of the Surveillance Resource Management process are described below:

a. There are enough resources to accomplish the CSP or procedures in this Chapter are used to obtain enough resources.

b. Trained and qualified CMT members are assigned to accomplish CSP inspections.

c. Staffing and training is provided to support accomplishment of the CSP.

d. Current training records and Inspector Resource Data Bases are available for all CMT members.

e. Written documentation exists when staffing shortfalls, inadequate travel funds or additional training needs were identified.

307. INTERFACES. The Surveillance Resource Management process interfaces with the Certificate Management process, the Surveillance Implementation process, and the System Configuration process.

a. The Certificate Management process generates the Inspector Work Plan.

b. The Surveillance Resource Management process reviews and assigns the Inspector Work Plan for the Surveillance Implementation process.

c. The System and Configuration process provides the baseline training and staffing required for Surveillance Resource Management to allocate resources.

308. - 399. RESERVED

APPENDIX 6. Air Transportation Oversight System

CHAPTER 4. SURVEILLANCE IMPLEMENTATION

401. INTRODUCTION. The Surveillance Implementation process when completed gives the FAA an accurate, real-time, and comprehensive evaluation of the Air Carrier's safety status and compliance with the Title 14 of the Code of Federal Regulations (14 CFR).

a. **The Surveillance Implementation process** utilizing the SAI and EPI provides the CMT a structure to coordinate, schedule, prepare, and accomplish the assigned Inspector Work Plans.

b. **SAI and EPI** provide the information for assessing certificate holders' compliance with 14 CFR and identifying safety trends. This information is used by the FAA to proactively correct deficiencies that may impact aviation safety.

402. OBJECTIVE. This chapter describes the process a CMT will use to conduct surveillance on an Air Carrier utilizing the CSP generated SAI and EPI.

403. RESPONSIBILITY. Roles and responsibilities in Surveillance Implementation are described below.

a. **The CHDO/CMO Manager** ensures that the CMT completes the CSP in accordance with established priorities and timelines. The CHDO/CMO Manager coordinates with CMT members' managers or supervisors on performance issues that affect CSP execution.

b. **The First Level Supervisor**, either in a FSDO or CHDO/CMO, is responsible to ensure that the ASI conduct their assigned work plans in accordance with the PI specific inspection instructions.

c. **Principal Inspectors** ensure that CMT members complete their Individual Work Programs (IWP) in accordance with established priorities, timelines, and specific instructions. The PI resolves conflicts that result in the inability to accomplish an SAI or EPI.

d. **SAI Team Coordinators (TC)** are responsible for organizing and coordinating SAI Team activities. The SAI TC informs the PI of any team member conflicts that could interfere with completing the SAI.

e. **Aviation Safety Inspectors** schedule, coordinate, and accomplish their assigned Inspector Work Plans. Inspectors may work individually or as part of a team.

404. AUTHORIZED SURVEILLANCE.

a. **ATOS CMT Inspectors.** For ATOS Air Carriers, only the following surveillance is to be conducted by CMT members:

(1) SAI and EPI identified in the CSP.

(2) Surveillance observations that are requested by PI in response to specific areas of immediate concern outside of the normal retargeting process. See Chapter 5 of this Appendix for a complete description of the Dynamic Observation Report (DOR).

(3) "Traditional" en route inspections. Traditional en route inspections should only be accomplished when an inspection activity associated with an assigned EPI can not be

accomplished. These traditional en route inspections should be reported in PTRS.

b. **Inspectors who are not assigned to an ATOS CMT** are authorized to accomplish specific types of unplanned inspections on ATOS Air Carriers in accordance with the memorandum included as Figure 4-1, Inspection of ATOS Air Carriers by Non-ATOS Aviation Safety Inspectors, at www.faa.gov/avr/afs/8400/Appendix6/fig4-1.pdf.

405. POLICIES AND PROCEDURES. The following describes the Surveillance Implementation tasks required to accomplish SAI and EPI. (See Figure 4-2, ATOS Surveillance Implementation Guidelines, at www.faa.gov/avr/afs/8400/Appednix6/fig4-2.pdf.)

a. **Conducting Safety Attribute Inspection (SAI) Surveillance Tasks.** SAI are completed by a team of inspectors. SAI assess the safety attributes associated with each Air Carrier system element. SAI are planned at the sub-system level and accomplished at the element level. Planning at the subsystem level is very important. It allows the SAI Team to accomplish a "related group" of elements more efficiently by reducing redundancy and more effectively by the knowledge gained from "related elements." The SAI TC plays an important role by organizing and coordinating all team activities.

(1) ***SAI Team Coordination and Communication.*** The SAI Team Coordinator (TC) decides how the team will communicate. Coordination and communication are especially important if all members are not at the same location. After reviewing the Principal Inspector instructions, the TC will organize a team meeting. This meeting can be in person, over the phone, or by other means.

(2) ***Distribute and Schedule Tasks.*** The TC distributes tasks among the SAI team and develops a timeline to complete the assigned SAI subsystem or group of related elements. The tasks may be distributed by element, safety attribute, individual questions, or some combination.

(3) ***Prepare to Perform Assigned Inspections.*** Once the TC distributes inspection activities, each inspector must prepare for the inspection. Specifically, the inspector should review at a minimum:

(a) PI instructions

(b) The data collection tools (available online) for that SAI;

(c) The Specific Regulatory Requirements (SRR) for the elements;

(d) Relevant FAA guidance such as Orders and Advisory Circulars;

(e) Air Carrier policies and procedures (e.g. manuals, Operation Specifications, and training programs) for the element being inspected; and

(f) Any findings collecting during surveillance on the associated EPI.

(4) ***Performing SAI activities.*** Inspectors will follow the *General Instructions for Completing Safety Attribute Inspections* found in Figure 4-3, Safety Attribute Inspections (SAI), at www.faa.gov/avr/afs/8400/Appendix6/fig4-3.htm.

(a) Each inspector must perform the appropriate tasks to answer the questions they are responsible for on the data collection tool.

(b) Because the SAI Team members perform specific tasks, the TC needs to monitor the progress of the inspection.

(c) The SAI TC works with the PI to resolve any conflicts or issues that could affect completing the SAI.

b. **Conducting Element Performance Inspection Surveillance Tasks.** EPI are the ATOS inspection that determine if an Air Carrier follows its written procedures and controls for each system element, and meets the established performance measures for each system element. EPI are planned for and executed at the element level and done by individual inspectors.

(1) ***Coordinate and Schedule Work Assignments.*** Inspectors must review their assigned Inspector Work Plan and coordinate the inspection activities with their schedule. If necessary, the inspector contacts other team members – or the Air Carrier if appropriate – to coordinate and/or confirm the logistical arrangements.

(2) ***Prepare to Perform Assigned Inspections.*** After the EPI has been assigned, each inspector must prepare for the inspection. Specifically, the inspector must review at a minimum:

(a) PI instructions;

(b) The data collection tool (available online) for that EPI;

(c) The Specific Regulatory Requirements (SRR) for that element;

(d) Relevant FAA guidance such as Orders and Advisory Circulars;

(e) Air Carrier policies and procedures (e.g. manuals, Operation Specifications, and training programs) for the element being inspected; and

(f) Any findings collecting during surveillance on the associated SAI.

(3) ***Performing the EPI activities.*** Inspectors will follow the *General Instructions for Completing Element Performance Inspections* found in Figure 4-4, Element Performance Inspections (EPI), at www.faa.gov/avr/afs/8400/Appendix6/fig4-4.htm.

(a) Every Data Collection Tool lists certain tasks that should be completed during the inspection. Each task is made up of various activities.

(b) The number of surveillance activities required to properly assess a given element may vary considerably. Each inspector must do as many activities as necessary to accurately answer all the questions on the data collection tool. The inspector should obtain a sufficient amount of quality observations across varied times and locations to reflect the performance of the system element.

406. CONTROLS. The controls built into the Surveillance Implementation process are described below:

a. The data collection tools have standardized tasks and questions that are associated with the applicable element.

b. Specific instructions provided by the Principal Inspector for the assigned inspection.

407. PROCESS MEASURES. The process measure used to confirm the success of the Surveillance Implementation process is that Inspectors perform assigned SAI and EPI in accordance with the PI specific instructions.

408. INTERFACES. The Surveillance Implementation process interfaces with the Surveillance Resource Management process, the Reporting process, and the Implementation (Action) process.

a. The Surveillance Resource Management process provides the Inspector Work Plans to the Surveillance Implementation process.

b. The Surveillance Implementation process provides the inspection data for the Reporting process.

c. The Surveillance Implementation process interfaces with the Implementation (Action) process by identifying unsafe conditions or possible regulatory violations that require immediate action.

409. - 499. RESERVED

APPENDIX 6. Air Transportation Oversight System

CHAPTER 5. REPORTING

501. INTRODUCTION. The Reporting process defines the method for transferring inspection data collected by the inspectors into the ATOS Data Repository. Efficient and accurate inspection reporting is necessary for the effective accomplishment of the subsequent processes, Evaluation and Analysis. This process will ensure that all inspection records are properly recorded into the ATOS Data Repository, conform to the ATOS Data Quality Guidelines, and are available for evaluation.

502. OBJECTIVE. This chapter provides the policies and procedures related to the reporting of inspection data.

503. RESPONSIBILITY. CMT members and their assigned roles and responsibilities for Chapter 5, Reporting, are identified below.

a. **FSDO/CHDO/CMO Managers** are responsible for making sure their inspectors record surveillance activities into the ATOS Data Repository in accordance with the policies and procedures in this Appendix.

b. **SAI Team Coordinators (TC)** are responsible for submitting a complete SAI record for each element they are assigned.

c. **Aviation Safety Inspectors** are responsible for entering surveillance results into the ATOS Data Repository. ASI must also ensure that data entered into the ATOS Data Repository meets ATOS Data Quality Guidelines. When reporting observations that are relevant to safety goals, but are unplanned or outside the CSP, each Inspector has the responsibility to submit reports using the Dynamic Observation Report (DOR) tool into the ATOS Data Repository.

d. **Aviation Safety Technicians (AST) and Aviation Safety Assistants (ASA)** who enter SAI or EPI activities for CMT Inspectors are responsible to transcribe these observations completely and accurately into the ATOS Data Repository.

504. POLICY AND PROCEDURES. The following describes the tasks required to enter inspection data in the ATOS Data Repository. (See Figure 5-1, ATOS Surveillance Reporting Guidelines, at www.faa.gov/avr/afs/8400/Appendix6/fig5-1.pdf.)

a. **Activities Recorded in the ATOS Data Repository.** All ATOS **surveillance** activities completed by CMT members are recorded in the ATOS Data Repository. A surveillance activity should never be entered in both the ATOS Data Repository and Program Tracking and Reporting Subsystem (PTRS). Any follow-up reporting (such as enforcement investigation or self-disclosure) would be reported in those systems.

b. **Recording the Use of Form 8430-13.** Activities that require the use of a form 8430-13 (*Request for Access to Aircraft*) should be recorded in one of two places: (See Figure 5-2, Memo Regarding Recording and Tracking of En Route Inspections, at www.faa.gov/avr/afs/8400/Appendix6/fig5-2.pdf.)

(1) either in the ATOS data repository (for the express purpose of being in the airplane to perform an EPI activity or a "directed" or assigned DOR).

(2) or in PTRS (for what we traditionally called "en route inspections").

(3) The use of the form should NEVER be reported in both databases for the same surveillance activity.

c. **Timely Recording of Surveillance Data.** The inspection data should be entered into the ATOS Data Repository as soon as practicable after each surveillance activity is completed. Significant benefits result from recording this data immediately upon completion of the activity. Data not reported in a timely manner is of little value.

NOTE: Significant issues or items of immediate concern shall also be verbally and promptly conveyed to the appropriate PI.

d. **Accessing ATOS Automation to Enter SAI / EPI Data.** The inspector who conducted the inspection activity or an ASA or AST assigned to the CMT enters the surveillance activity data into the ATOS Data Repository. See the ATOS Automation User Guide for detailed instructions.

e. **Entering Common Data Field Information.** The user enters information into all those common data fields that are relevant to the activity reported for this inspection.

(1) **Mandatory Common Data Fields.** At a minimum, every inspection activity must include *Activity Start Date, Activity End Date,* and *Departure Point/Location.*

(2) **Guidance for each common data field** is provided in the Automation User Guide and in the Data Quality Guidelines contained in Figure 5-3, ATOS Data Quality Guidelines, at www.faa.gov /avr/afs/8400/Appendix6/fig5-1.pdf.

(3) **Edits and Validation Checks.** As the user enters the data, first-level data entry edit and validation checks are applied to the inspection data.

f. **Activity Report.** After entries are made into the common data fields, the user continues into the activity report where automation displays the element-specific Data Collection Tool questions for the selected SAI or EPI. The user enters responses to only those questions that can be answered from the surveillance activity or observation accomplished.

(1) **Entering responses to data collection tool questions.** The questions are answered with either a *"Yes," "No,"* or *"N/A."* If the inspector is unsure whether something observed was unsatisfactory or potentially unsatisfactory, the question should not be answered for that activity. The inspector needs to do additional research and/or plan another activity to make a definitive determination.

(2) ***"Yes"* Response.** The Data Collection Tool questions are written so that *"Yes"* is always a favorable response. If the Inspector selects a *"Yes"* response for a question, they may enter additional information in the "Yes comments" field. This comment field is not a mandatory field, but any entry must meet the ATOS Data Quality Guidelines.

(3) ***"No"* Response.** A *"No"* always indicates a negative response. For each *"No"*

response, the inspector must provide an explanation that describes the observations causing the negative response. Explanations must be complete and descriptive, with as much information as necessary for someone knowledgeable with the air transport industry to understand without requiring further information.

NOTE: When reporting an EPI activity, a *"No"* response allows the inspector to select an ATA code. When the appropriate 2-digit ATA code is selected, the inspector is then able to choose the most appropriate 4-digit ATA code. The inspector must enter the 4-digit ATA code if there is a code relevant to the observation.

(4) ***"Not Applicable"* Response.** For some SAI or EPI questions, the *"N/A"* response may be displayed. This option is associated only with questions that are not applicable due to the types of operations authorized for the particular air carrier.

(5) **Recording Actions Taken.** If the reporting Inspector performed any actions in response to observed deficiencies, the actions must be entered in the *"Reporting Inspector Action Taken"* field. Whenever a question is answered with a "No" response, the *"Inspector Action Taken"* field associated with that specific data reporting tool question is available. Actions may include, but are not limited to:

(a) Notifying appropriate Air Carrier personnel of a potential non-compliance;

(b) Initiating an enforcement investigation;

(c) Consulting with Air Carrier personnel to effect an action; or

(d) Notifying the Principal Inspector.

(6) **PI Response Requested.** If on any inspection activity report, the reporting inspector would like to advise the PI to review the information submitted, the *"PI Response Requested"* box should be selected.

(a) The PI may then respond with comments in the *"PI Comments"* field.

(b) This function is not intended for use with time-critical information that needs a rapid response, since the information is not available to the PI until after it has been evaluated and released to the ATOS Data Repository.

(c) PI may also enter comments in the *"PI Comments"* field as follow-up information to the inspection activity report.

g. **Saving SAI / EPI Activity Reports.** Users have the option of saving activity reports as "Work-in-Progress," "Draft," or "Final."

(1) **Work-in-Progress.** If the user enters some inspection data but is not able to complete the entry, the user may save the data entered as "Work-in-Progress."

(a) The user can, at a later time, bring up the inspection activity report and change or add new data. An activity saved as "Work-in-Progress" may be deleted by the reporting inspector.

(b) ASA and AST users, who enter inspection data for CMT Inspectors,

can save activities only as "Work In Progress."

(c) The Reporting Inspector must verify all the entries that are made by an AST or ASA and by saving the activity report to "Draft" or "Final" acknowledges the accuracy of those entries.

(2) **Draft.** When the reporting inspector determines that the inspection activity report is complete and accurate, they may save the inspection activity report as "Draft." The inspector retains the ability to make changes to the report at this time, but activities saved to "Draft" cannot be deleted.

(3) **Final Activity Reports.** When the reporting inspector determines that the activity report is complete and meets the ATOS Data Quality Guidelines, they may select the *"Final"* option on the reporting screen. At this time, no changes can be made to the report.

(4) **Save to Master Record.** An Inspection Record is made up of individual inspection activity reports. In order for the Inspection Record to be complete and saved as "Final," all questions must be answered at least once.

(a) In the SAI reporting process, the SAI Team Coordinator (TC) reviews all inspection activity reports submitted by the SAI Team members. After deciding the SAI record is complete, the TC selects the *"Save to the Master Record"* option on the Detailed Report screen. The entire record is then available to the DEPM for evaluation.

(b) In the EPI reporting process, the reporting inspector reviews the entire record for completeness and selects the *"Save to Master Record"* option on the Detailed Report Screen. Now the entire record is available to the DEPM for review.

h. **Reporting Dynamic Observations**. The Dynamic Observation Report (DOR) allows inspectors to record certain surveillance observations outside the comprehensive surveillance planning process. In addition, the PI may request or assign unplanned surveillance activities, with instructions to inspect and report on specific areas of immediate concern outside of the normal CSP retargeting process. (See Figure 5-4, Dynamic Observation Reports (DOR) Memorandum, at www.faa.gov/avr/afs/8400 /Appendix6/ fig5-4.pdf.)

(1) **Observations that may be reported using a DOR.** The DOR is not a substitution for planned and targeted surveillance that is included in the CSP. It is not intended for routine use. The DOR should be used only under the following situations:

(a) Single-activity observations unrelated to the ATOS system element they are inspecting.

(b) Unplanned observations when there is not an ATOS element that addresses the unique situation.

(c) Observations that are related to the system element they are inspecting, but which are not covered by the Data Collection Tool questions.

(d) Observations on specific inspection events as directed by Handbook Bulletin or other National directive.

(e) Surveillance observations that are requested by PI in response to specific areas of immediate concern outside of the

normal retargeting process, such as labor unrest.

(2) **Creating a DOR**. Within ATOS automation, the Inspector opens the DOR function by selecting the *"Create a DOR"* option. The DOR displays two formats for recording the non-CSP data. The user must select the most appropriate format based on the nature of the observation or information to be recorded.

(a) The first format called ***"Element Based Observation"*** allows the Inspector to record an unplanned observation for an existing element. The Inspector answers the appropriate Data Collection Tool questions relating to a particular EPI element.

NOTE: Unlike an EPI record, the Reporting Inspector is not required to answer all available questions prior to saving a DOR.

(b) The second format called ***"Other Observations"*** allows the Inspector to record observations that do not relate to an existing element or data collection tool question. This format includes a generic information-reporting block where the Inspector can record "other observation" information.

(3) **Recording Pertinent Information.** After selecting the appropriate format, the Inspector will record all the pertinent information relating to the observation.

(4) **Saving the DOR.** After completing the entry and reviewing it to ensure that it meets the ATOS Data Quality Guidelines, the Reporting Inspector saves the DOR.

i. **Access to ATOS Data Repository**. Information Systems Security requirements determine each user's level of access to the ATOS Data Repository based on assigned roles and responsibilities.

(1) **SAI / EPI Work-in-Progress.** SAI and EPI Activity reports that have been saved as "Work in Progress" are accessible only to the reporting inspector and AST or ASA assigned to the CMT tasked with inputting the data.

(2) **SAI / EPI Draft.** SAI and EPI activity reports that have been saved as "Draft" are available in ATOS automation (read-only) to the reporting inspector's manager, supervisor, and in the case of an SAI, all members of the SAI team.

(3) **SAI / EPI Final.** Activity reports that have been saved as "**Final**" are available for review by the Reporting Inspector's manager, supervisor, Principal Inspectors, DEPM and in the case of an SAI, all members of the SAI team.

(4) **Dynamic Observation Reports (DOR***)* saved by the reporting Inspector are immediately available to:

(a) The Reporting Inspector's Manager and Supervisors.

(b) All CMT members for the Air Carrier that was observed.

(5) **Validated Surveillance data.** Once the SAI/EPI or DOR record has gone through the evaluation process, it is available (read-only) to anyone having authorized access to the ATOS data repository.

505. CONTROLS. The controls built into the Reporting process are identified below:

a. Automation ensures that only the Inspector who conducted the inspection activity (or an ASA or AST on the CMT) can enter inspection activities into ATOS.

b. ASA and AST users, who enter inspection data for CMT Inspectors, can save activities only as "Work In Progress." The inspector who conducted the activity is the only person who can save an activity report as "Draft" or as "Final."

c. Only an SAI Team Coordinator can save the SAI to the Master Record.

d. Only the Reporting Inspector can save the EPI to the Master Record.

e. Automation ensures that only the Inspector assigned an SAI or EPI (or an ASA or AST on the CMT) can access inspection activity reports to input data.

f. Automation displays only those questions that are associated with the applicable element.

g. Automation ensures that all questions for an SAI and EPI record are answered at least once before they can be submitted for data evaluation.

h. Automation prevents users from saving an activity until an explanation has been entered for each "no" response.

i. Automation links all inspection activity reports to the corresponding inspection record.

j. Automation links all inspection records to the reporting inspector.

k. Data entry validation in the common data field minimizes data entry errors.

506. PROCESS MEASURES. The process measure used to confirm the success of the Reporting process is that all inspection records are properly recorded into the ATOS Data Repository and are available for evaluation.

507. INTERFACES. The Reporting process interfaces with the Surveillance Implementation and Evaluation processes.

a. Surveillance Implementation provides the inspection data to be reported.

b. The Reporting process yields the inspection records on which the Evaluation process is performed.

508. - 599. RESERVED

APPENDIX 6. Air Transportation Oversight System

CHAPTER 6. EVALUATION

601. INTRODUCTION. The Evaluation Process ensures that quality data has been entered into the ATOS Data Repository. This process provides the CMT with the means to evaluate the data collected through surveillance by applying a structured process to ensure data quality. Initial validation is provided by the automation to ensure that valid data, specific to the assigned Air Carrier, is entered in data entry fields. Secondary validation is provided by the DEPM, who reviews all inspection records for the CMT.

NOTE: For clarification purposes, the term inspection record refers to SAI, EPI, and DOR surveillance data collected by the CMT members.

602. OBJECTIVE. The objective of this chapter is to define the evaluation process a DEPM will use to ensure all inspection records in the ATOS Data Repository have been evaluated using the ATOS Data Quality Guidelines. The Chapter also defines procedures the DEPM will use to maintain the CMT tables in the Data Repository that provide current and accurate information to the CMT.

603. RESPONSIBILITY. The roles and responsibilities in the evaluation process are listed below.

a. **Managers** have the responsibility to ensure that inspectors submit inspection records that meet the ATOS Data Quality Guidelines.

b. **DEPM**. The primary responsibility of the DEPM is to evaluate Data that has been entered into the ATOS Data Repository using the ATOS Data Quality Guidelines. The DEPM also:

(1) Coordinates a resolution of any data discrepancies in the inspection record with the reporting inspector.

(2) Assists the Principal Inspectors and other CMT members in resolving issues regarding technical data input.

(3) Generates a monthly report of the DEPM non-concurrences that do not contain a PI comment.

(4) Maintains user access rights, the CMT Roster, various lookup tables and databases.

(5) Works with the CMT, especially principal inspectors, to develop, implement, and evaluate office processes to ensure that the inspection records meet the ATOS Data Quality Guidelines.

c. **Principal Inspectors** are responsible for reviewing and commenting on any inspection record that is saved to the ATOS Data Repository with a non-concurrence.

d. **Aviation Safety Inspectors** reevaluate returned inspection records and decide on the appropriate action (e.g., editing the record, conducting additional observations, or taking no action.)

604. POLICY AND PROCEDURES. The following describes the tasks required to evaluate inspection data.

a. **Evaluation of Reports and Records.**

(1) The DEPM will access the ATOS Data Repository daily to determine if final activity reports or inspection records are awaiting evaluation.

(2) The DEPM should evaluate inspection records within seven (7) calendar days from the date they become available.

(3) The DEPM will review each activity report and inspection record using the ATOS Data Quality Guidelines.

NOTE: If the DEPM sees information that might be critical or time sensitive, the DEPM should tell the respective PI immediately.

(4) At the end of the evaluation process the inspection record is available for analysis and viewing by all CMT members.

b. **Non-concurrence with Inspection Record.** If the DEPM determines the data in the record does not meet the ATOS Data Quality Guidelines, the DEPM records all discrepancies in the *"DEPM Comment"* text box. The DEPM will then coordinate with the reporting inspector to resolve these discrepancies and return the inspection record to the inspector. The inspector should agree to make the changes or decline to make the changes, and save the inspection data to Master record within seven (7) calendar days.

(1) **Inspector agrees to make changes.** The reporting inspector may choose to make changes in the record. If so, after the changes are made, the record is returned to the DEPM for evaluation.

(2) **Inspector declines to make changes.** The reporting inspector may determine that the inspection record meets the ATOS Data Quality Guidelines, retains the record in its original form, and returns it to the DEPM for evaluation.

NOTE: This process may occur multiple times with a single record.

(3) **DEPM records comments.** At the end of this process, if the DEPM concludes that the inspection record does not meet the Data Quality Guidelines, the DEPM will mark the inspection record as *"non-concurrence"* and enter comments explaining the reason for the non-concurrence.

(4) **PI reviews and comments.** The Principal Inspector reviews and comments on all Inspection Records that have completed the Evaluation Process and do not have DEPM concurrence. This review will be accomplished within 30 calendar days from the date of the non-concurrence.

(5) **Monthly Non-concurrence Report.** At least monthly, the DEPM provides each PI with a listing of all inspection records that received DEPM non-concurrence and do not include PI comments. The DEPM also provides a copy of this listing to the PI's manager.

c. **Concurrence with Inspection Record.** If the inspection record meets the ATOS Data Quality Guidelines, then the DEPM will mark the record as "concurred."

d. **CMT Table Management.** The DEPM maintains certain tables in the Data Repository that provide current and accurate information to the CMT. These include:

(1) The CMT Roster based on an active CMT membership.

(2) The associated aircraft Make/Model/ Series lookup table.

(3) The aircraft registration "N" number lookup table.

(4) The Manager/Supervisor database for the active CMT membership.

605. CONTROLS. The controls built into the Evaluation process are identified below:

a. Automation ensures that DEPM non-concurrence cannot be entered without explanation.

b. Automation ensures that only the inspector who entered information into the inspection record may change the inspection record.

c. Automation ensures that only the associated DEPM is authorized to add or change CMT roster information.

d. Automation will only display those records to the DEPM that are associated with the CMT.

e. Automation will only display to the DEPM those records saved to the Master Record by the reporting inspector.

606. PROCESS MEASURES. The process measures used to confirm the success of the Evaluation process are identified below:

a. All non-concur records from the DEPM have PI comments.

b. The CMT tables in the Data Repository contain current and accurate information.

c. All surveillance records meet the ATOS Data Quality Guidelines or have DEPM non-concurrence.

607. INTERFACES. The evaluation process interfaces with the reporting, surveillance implementation, and analysis processes.

a. The reporting process provides inspection data to be evaluated.

b. The evaluation process may lead to additional surveillance implementation.

c. The evaluation process yields quality data for the analysis process.

608. - 699 RESERVED

APPENDIX 6. Air Transportation Oversight System

CHAPTER 7. ANALYSIS

701. INTRODUCTION. The ATOS Risk Management Process (RMP) is comprised of Analysis (ATOS Process Module 7) and Implementation (ATOS Process Module 8) processes. The Analysis process uses the results of the CMT's Surveillance Implementation, Reporting, and Evaluation processes to aid in risk management decision-making. When appropriate, the process also calls upon other available sources of data and information. The CMT uses these data to identify trends, deficiencies, and root causes. Once the analysis is complete, the Principal Inspector (PI) determines a course for FAA action in the Implementation (Action) process. During these activities, the air carrier has the primary responsibility for taking action on all safety problems.

702. OBJECTIVES. The ATOS Process Module 7 (Analysis) objectives are to:

- Provide the CMT with an effective way to identify, analyze, and assess risks so that they can be effectively managed.
- Provide CMT decision-makers with rational bases for decision-making by understanding and structuring complex situations and using this understanding to predict system behavior and improve system performance.

703. RESPONSIBILITY. The CMT members and their assigned roles and responsibilities for Analysis are as follows:

a. CHDO/CMO. Office managers ensure that the CMT analyzes information regarding their assigned air carrier.

b. Principal Inspectors (PI). PIs identify and bring aviation safety concerns to the analyst's attention. PIs communicate their analysis needs to the CMT analyst.

c. Aviation Safety Inspectors. Inspectors identify unsafe conditions or possible regulatory violations observed during surveillance and make appropriate entries in FAA data systems (e.g., ATOS Data Repository, PTRS). They may also perform qualitative reviews of available data that falls within their subject matter expertise.

d. The Operations Research Analyst (ORA). The ORA provides information to guide the CMT in conducting system safety analyses. The ORA helps clarify safety issues by researching data and looking for trends, patterns, and generalizations. The ORA also helps to build effective sampling plans for data collection.

e. Data Evaluation Program Manager (DEPM). The primary responsibility of the DEPM is to evaluate data that has been entered into the ATOS Data Repository using the ATOS Data Quality Guidelines.

f. Flight Standards Safety Analysis Information Center (FSAIC). FSAIC provides guidance and support to CMTs on analytical matters.

704. PROCEDURES.

a. The System Safety Process.

(1) The system safety process assists the CMT in documenting identified hazards, conducting the risk analysis process, preparing an action plan, and validating the effectiveness of the action plan.

(2) PIs and other CMT members should focus on the carrier's system processes and systemic problems during analysis (ATOS Process Module 7) and implementation (ATOS Process Module 8). Systemic problems are those that indicate defects in the carrier's processes (e.g., missing procedures, poor controls, lack of attention to interfaces, etc.), poor performance of procedures, or patterns of repeated non-compliance with procedures.

b. Introduction to Analysis. The ORA conducts routine analyses of data from the ATOS CSP (e.g., SAI, EPI) and will assist the CMT in designing and executing special studies and analysis to support needs that are outside of the normal scope of the ATOS tools. The *System Data Analysis Guide* contains instructions for correlating data from the Program Tracking and Reporting Subsystem (PTRS). More detailed information on analysis processes can be obtained from the *System Data Analysis Guide, the Special Studies Analysis Guide, and the Data Collection Planning Guide.*

c. Analysis for Risk Management. Hazards are situations, concerns, or other problems that have been evaluated in terms of risk. Analysis consists of three elements of the system safety process: hazard identification, risk analysis, and risk assessment. A database of hazards, along with linkages to underlying ATOS data and planning tools will be part of the ATOS automation toolset. At the end of the risk assessment procedure, the output of the process is a set of hazards and associated potential consequences, along with information on risk factors involved and an assessment of the level of risk severity and likelihood. This information will be provided to the decision-making process for the formulation of an action plan. These processes are covered in Chapter 8.

(1) Hazard Identification. The first step of the analysis process is identification of a hazard and the potential consequences of that hazard.

(a) Hazard Identification. The PI will prepare a short statement describing the hazard. Emphasis should be on identifying and then managing systemic issues versus isolated findings.

All members of the CMT should be alert for potential hazards and bring them to the attention of the PI. PIs will determine which issues will be entered into the Risk Management Process (analysis (ATOS Process Module 7) and Implementation (ATOS Process Module 8)).

PIs may also use the Risk Management Process if, in their judgment, an issue is significant enough to justify intensive analysis and tracking. They may also use other processes for addressing the hazard (e.g., EPI "Inspector Action" block, PTRS, ASAP program documents, EIR, etc.). Without conducting a complete analysis, PIs may also notify the air carrier of hazards that they deem to be isolated or minor. The ORA will continuously monitor available data sources to identify events, trends, or patterns that indicate potential safety problems. The ORA will review issues that are already entered into the automation

system to avoid duplication and to identify any issues that may be related.

(b) Evaluating Potential Consequences. The PI or designated representative, with ORA support, evaluates the hazard condition for potential consequences. The potential consequences should address human error, equipment failure, or process breakdown that will be the direct result if the hazard is left alone. The PI or designated representative selects a potential consequence from a menu and provides additional detail if desired.

(2) Risk Analysis. The second step in the analysis process is risk analysis. Risk is described in terms of severity, likelihood, and factors affecting each of them. The ORA and other CMT members analyze hazards to identify factors that affect the severity of the potential consequence and the likelihood of the consequence actually occurring. The air carrier may be able to provide data or other information to help identify risk factors affecting the hazard.

(a) Risk Factors. Identification of risk factors assists in risk assessment and provides specific targets for action plans. Factors are typically situational factors (e.g., specific make-model of airplanes, specific locations, etc.) or deficiencies in design or performance related to safety attributes (e.g., missing procedures or procedures not complied with). An effective action plan should address risk factors by eliminating them or by reducing their impact.

- ***Risk Factors:*** If present, these factors may affect the severity of the potential consequence and the likelihood of the consequence actually occurring.

(b) Severity and Likelihood Values

- ***Severity Value***: Severity is assessed along the levels in the standard AFS-900 risk matrix (High, Medium, Low). Severity assessments are produced using a combination of available data and expert judgement. Severity is defined using the following scale:

High - Potential loss (or breakdown) of an entire system or sub-system; accident, or serious incident.
Medium – Potential moderate damage to an aircraft; partial breakdown of an air carrier system; violation of regulations or company rules.
Low - Potential poor air carrier performance or disruption to the air carrier.

- ***Likelihood Value***: Likelihood is assessed along the levels in the standard AFS-900 risk matrix (Frequent, Probable, Occasional, Remote). Likelihood assessments are produced using a combination of available data and expert judgement. Likelihood values are defined as follows:

Frequent - Continuously experienced
Probable - Will occur often
Occasional - Will occur several times
Remote - Unlikely, but can reasonably be expected to occur

(3) Risk Assessment. The final step in the safety issue analysis process is risk assessment. The automation computes an overall risk assessment number based on the matrix below. The automation uses the severity and likelihood values approved by

the PI. The assessment number (1 through 12) determines the overall risk category (high, medium, or low overall risk), as noted below the matrix. This assessment is provided to assist the PI in decision making, FAA action planning, and evaluation of air carrier actions.

	High	Medium	Low
Frequent	**1**	**3**	**5**
Probable	**2**	**6**	**8**
Occasional	**4**	**9**	**11**
Remote	**7**	**10**	**12**

Overall Risk Categories:

1-3 (Red) = High Overall Risk
4-9 (Yellow) = Medium Overall Risk
10-12 (Blue) = Low Overall Risk

(4) Air Carrier Notification. After the risk assessment step, the PI should inform the air carrier of the hazard and associated risk factors. PIs determine the scope and specific content of any information made available to the air carrier about the hazard. Any information included is intended to help the air carrier determine the appropriate action for the hazard.

(5) Action on Hazards and Associated Risk Factors. Following analysis, the system safety process proceeds to decision-making and action planning steps. These steps are covered in Chapter 8, Implementation.

d. Other Analysis Tasks. In support of the CMT's analysis activities, various studies will be conducted. This section describes development of data collection plans and planning of focused inspections conducted by the CMT. The ORA and assigned ASI's, at the direction of the PI, will conduct these studies either in conjunction with routine CSP planning or in response to identified safety issues.

(1) Data Sampling Techniques for Data Collection Plans. Analyses that support decision-making should use data that are representative of the air carrier's systems and processes. This requires that enough valid data are collected to ensure that conclusions represent systemic, rather than isolated issues. A representative sampling of observations should be done by the CMT.

(a) Situations that can affect performance may vary at different locations, in different fleets, or with different outsource contractors. The data collection plan should account for these factors. This may entail taking multiple samples at multiple locations, times of day, etc.

(b) Sampling of data does not, however, always mean that a large number of observations must be taken in all cases. If a limited number of observations at selected locations provide data that are representative of the carrier's performance, visits to all locations may not be necessary, resulting in a savings of resources.

(c) The CMT ORA helps develop data collection plans, both in the case of the CSP and in the case of focused surveillance that addresses special issues. Additional information is contained in the *Data Collection Planning Guide.*

(2) Conducting Special Studies and Analysis. The PI may initiate a special study when the CMT determines that it needs to address an issue that is outside of the topics covered on standard SAI, EPI, or ConDOR tools. These studies may be used to support action items in an Implementation

Process, System Analysis Team (SAT) effort, or other CMT requirements. A special study should follow the steps of the traditional research process. Assigned CMT members, with assistance of the ORA, should prepare an analysis plan.

(a) The first step defines the problem issue. The CMT must determine what it is that it needs to know about the air carrier's processes, programs, performance, compliance in a particular area, etc. The ORA can help to scope this into a question that can be addressed through data collection and analysis.

(b) Second, the CMT should develop a data collection tool. In most cases, this is a set of instructions or questions to be captured on a DOR.

(c) Third, the CMT should develop a data collection plan, as in paragraph a., above. DEPMs need to be aware of the objective of the plan, the information desired, and the requirements of the data collection plan.

(d) The ORA should develop an appropriate analysis method at the same time that the first three steps are being completed. The methodology in the study should have a specific problem definition, data collection method, data collection plan, and analysis methodology that are compatible. If statistical analysis is needed, the ORA can develop a statistical hypothesis. If qualitative analysis is to be used, the PI should define decision criteria.

(e) Analysis may require a joint effort on the part of the ORA and other assigned CMT members. If analysis requires interpretation of comments, the PI should assign inspectors of appropriate disciplines to help in reducing and analyzing data.

(f) If a formal report is required, such as to make a presentation to the air carrier to address a safety issue, the ORA should develop a format in the analysis plan, including design of appropriate graphical displays.

(g) More information on these tasks can be obtained in the *System Data Analysis Guide, the Special Studies Analysis Guide, and the Data Collection Planning Guide.*

705. CONTROLS.

a. The ORA and PIs conduct a review of open hazards on a regular basis. The CMT develops and implements a schedule for these reviews. The ORA also conducts a review of all deficiencies identified in the data repository that are not connected to an open hazard in conjunction with these reviews. Periodic reviews of closed or accepted items are also conducted to ensure that the status of these hazards has not changed.

b. The CMT enters and maintains hazards and associated process impacts, factors impacting risk severity and likelihood, and final risk assessments and related rationale in the automated system. The CMT uses the automation system as a means of documenting and tracking hazards.

c. Automation requires entry of system, subsystem, and/or elements associated with each hazard to ensure that a systemic focus is maintained. Analysts and PIs also review issues to ensure that only systemic problems are tracked through the system.

706. PROCESS MEASURES.

a. The automation system maintains completed Risk Management Process analyses in accordance with ATOS automation archival policies.

b. The CMT members review RMPs periodically for status in accordance with a schedule they establish.

c. The analysis process is subject to periodic reviews by the CHDO manager or assigned designee.

707. INTERFACES. The ATOS Process Module 7 (Analysis) interfaces with ATOS Process Module 6 (Evaluation) for receipt of ATOS data and ATOS Process Module 8 (Implementation) for resolution and tracking of the Risk Management Process.

708. – 799. RESERVED.

APPENDIX 6. Air Transportation Oversight System

CHAPTER 8. IMPLEMENTATION (ACTION)

801. INTRODUCTION. The Implementation (Action) process is used by Certificate Management Teams (CMT) to ensure that certificate holders eliminate hazards or reduce risk levels.

802. OBJECTIVE. This chapter provides the policies and procedures related to the Risk Management Process.

803. RESPONSIBILITY. The CMT members and their assigned roles and responsibilities for Chapter 8, Implementation (Action), are identified below.

a. Regional Division Managers allocate resources to support the Risk Management Process.

b. CHDO/CMO Managers provide the resources necessary to support the Risk Management Process.

c. Principal Inspectors (PI) have the overall responsibility for the Risk Management Process.

d. CMT Members. Any Aviation Safety Inspector (ASI) on the active CMT Roster may be assigned to perform tasks associated with the Risk Management Process.

e. Operations Research Analyst (ORA). The ORA assists the CMT in the Risk Management Process by analyzing and evaluating data.

f. Data Evaluation Program Manager (DEPM). The primary responsibility of the DEPM is to evaluate data that has been entered into the ATOS Data Repository using the ATOS Data Quality Guidelines.

804. POLICY AND PROCEDURES. The Risk Management Process described in this chapter is the method used to develop, report, and document the Implementation (Action) process. Detailed instructions for using the Risk Management Process are provided in the Risk Management User Guide.

The Risk Management Process can be used to:

- Track the actions taken by the CMT to ensure that the certificate holder eliminates hazards or reduces risk levels.
- Track the actions of a System Analysis Team (SAT).

a. Begin Risk Management Process Development. The PI uses the Risk Management Process to ensure that the certificate holder addresses hazards forwarded from the analysis process and other sources based on:

- Analysis outcome
- Local, Regional, or National considerations
- Timeliness of required actions, and
- Any other unique factors

b. Select Approach. The PI/designated person selects one of the following three approaches for ensuring the certificate holder manages its risks. If the selected approach is "Monitor" or "Transfer", the PI may proceed to paragraph 804 i, "Close RMP".

(1) Monitor. When the PI/designated person determines that no additional action is needed, the CMT continues to monitor the

hazard through the normal ATOS surveillance.

(2) Transfer. When corrective action for the hazard is beyond the CMT's authority, the PI/designated person can allocate the authority, responsibility, and accountability for taking action to the appropriate FAA organization. Use "transfer" to track recommendations such as rule changes, new or revised ADs, policy changes, and FAA safety recommendations.

(3) Mitigate. When action is needed to ensure that the certificate holder eliminates hazards or reduces risk levels, the supporting information from the analysis process or other sources may help the PI/designated person determine the most appropriate mitigating strategies.

c. Document Rationale. The PI or designated person describes the reason for selecting the approach.

d. Develop Action Items. The PI or designated person describes the action items and identifies personnel resources necessary to ensure that the certificate holder manages the identified risks.

(1) Action Items describe what, how, where, and when an action should be done. Action items should be relevant to the selected approach and any actions the certificate holder takes to manage the identified risk. Risk Management Process action items should include any follow-up surveillance activities and data collection required to sufficiently document the completion of the action items and validation of the Risk Management Process outcome.

(a) "Monitor" Action Items--Continue with normal ATOS surveillance.

(b) "Transfer" Action Items--Record the steps taken to transfer the issue to the appropriate FAA organization. The PI/designated person may decide to conduct follow-up activities to follow-up on the status of the issue.

(c) "Mitigate" Action Items--Mitigation is usually carried out by the certificate holder with CMT oversight, however, sometimes the CMT may use mitigation strategies that do not involve the certificate holder. Mitigating strategies may include:

- Reevaluate certificate holder's programs, approvals, authorization, deviations, and exemptions.
- Amend or revoke the certificate holder's authority to conduct all or part of its operation.
- Initiate an enforcement investigation.
- Convene a System Analysis Team (SAT). The SAT process is a collaborative effort in which the certificate holder, other non-FAA entities, and the FAA work together to determine causes and recommend possible solutions. It also ensures that feedback concerning actions is provided to applicable parties as part of the information sharing process. (See Figures 8-1 and 8-2.)

(2) Personnel Resources. The PI or designated person recommends who should perform each action item. If the recommended person does not report directly to the PI, the PI will coordinate with the person's supervisor.

(3) Identify FAA Resources. The PI or designated person documents any FAA resource shortfalls that could impact the accomplishment of the Risk Management Process. The PI uses the process in Chapter 3

of this Order, Surveillance Resource Management, to address resource shortfalls.

e. Review and Approve. After the PI approves the Risk Management Process, it is released for implementation.

f. Perform Activities. Each identified CMT member performs and reports their assigned action items.

g. Monitor Risk Management Process Progress. Throughout the course of the Risk Management Process, the PI/designated person monitors the progress of the action items to determine if it is time to move on to validation. You can move on to validation when:

- All action items are completed, AND
- There are current data on hand that indicate the action plan has positively affected the hazard, including its risk factors.

When sufficient current data are not available additional data collection activities (e.g., retarget CSP, SAI or EPI, DOR, ConDOR) should be accomplished.

h. Validate Risk Management Process. The steps in validation represent a listing of the areas that must be considered in the validation process. Updates to these fields are not required and do not represent separate data collection. They are a review of prior steps to validate the effectiveness of the Risk Management Process.

(1) Review Hazard Description. Review the hazard description from the Analysis page and describe any changes that have occurred in the hazard as a result of the action plan.

(2) Update Consequence Categories. Review the selected consequence categories and any further description from the Analysis page and describe any changes that have occurred to the hazard's consequences because of the action plan.

(3) Update Risk Factors. Review the risk factor types and their descriptions from the Analysis page. Check if the certificate holder (or FAA) has addressed each factor and describe any changes that have occurred to the factors because of the action items.

(4) Update Likelihood Value. Using the data from the updated hazard description and updated risk factors, update the risk likelihood value.

(5) Update Severity Value. Using the data from the updated consequence categories, update the risk severity value.

(6) Update Overall Risk Assessment. The automated system will update the overall risk assessment based on the updated likelihood and severity values.

(7) Update Approach. Update your approach to addressing the hazard and its related risk factors.

(8) Update Approach Rationale. Review all your validation information and then summarize it as the basis for your selection of mitigate, monitor, or transfer as the approach. In your summary, consider describing the changes to the hazard and its related consequences, risk factors, likelihood and severity values, and overall assessment. Attach any documentation you might have to support your decision.

i. Close Risk Management Process. It is appropriate to close a Risk Management

Process when the approach is "Monitor" or "Transfer" and the PI decides not to expend any additional resources beyond normal surveillance activities. The PI documents date of Risk Management Process closure.

j. Review Risk Management Processes. The CMT should consider open and closed Risk Management Processes when modifying or creating a Comprehensive Surveillance Plan.

805. CONTROLS. The controls built into the Implementation (Action) process are identified below:

a. The Risk Management Process is documented.

b. Action items are:

- Recorded in Automation by the CMT member
- Tracked by the PI/designated person
- Linked by Automation to the corresponding Risk Management Process and the appropriate reporting CMT member.

c. Automation ensures that:

- Only the PI can approve a Risk Management Process for implementation
- Only CMT members from the Active CMT Roster may be selected to accomplish Risk Management Process activities
- Only the Inspector assigned to a Risk Management Process action item, or a designated ASA/AST, can input data
- Only the inspector who entered information into the Risk Management Process or an assigned ASA/AST may change that particular entry
- Only the PI can close a Risk Management Process and save it to the Data Repository

806. PROCESS MEASURES.

a. The measure used to determine the success of the ATOS Implementation (Action) process is the elimination of hazards or reduction of risk levels.

b. The process is considered successful when subsequent surveillance and data analysis confirms that the hazard(s) were eliminated or the risk level(s) were reduced because of the Implementation (Action) process.

807. INTERFACES. The Implementation (Action) process interfaces with the Analysis, Certificate Management, and System Configuration processes.

a. The Implementation (Action) process receives hazard information from the Analysis process containing information on background, risk factors, and an assessment of the risk levels. This information is the basis for the Risk Management Process.

b. The Implementation (Action) process provides information to the Certificate Management process, and the Analysis process.

c. The Implementation (Action) process also provides input on possible changes to certificate holder configuration or CMT composition to the System Configuration process.

808. - 899. RESERVED

APPENDIX 6 -- Air Transportation Oversight System

CHAPTER 9 – FIGURES AND ACRONYMS

901. FIGURES REFERED TO IN THIS APPENDIX. The following figures are attached to this appendix.

a. Figure 1-3, Air Carrier Specific Familiarization Briefings.

b. Figure 2-1, ATOS Surveillance Planning Guidelines.

c. Figure 2-2, Air Carrier Assessment Tool (ACAT).

d. Figure 2-3, Comprehensive Surveillance Plan (CSP) for Safety Attribute Inspections (SAI).

e. Figure 2-4, Comprehensive Surveillance Plan (CSP) for Element Performance Inspections (EPI).

f. Figure 3-1, Sample Cover Memo for Inspector Work Plan Submittal.

g. Figure 4-1, Inspection of ATOS Air Carriers by Non-ATOS Aviation Safety Inspectors.

h. Figure 4-2, ATOS Surveillance Implementation Guidelines.

u. Figure 4-3, Safety Attribute Inspections (SAI).

(1) Figure 4-3-1, Sample Safety Attribute Inspection (SAI) Data Collection Tool.

(2) Figure 4-3-2, General Instructions for Completion of Safety Attribute Inspections.

(3) Figure 4-3-3, Standard Safety Attribute Inspection Data Collection Tool Questions.

j. Figure 4-4, Element Performance Inspections (EPI).

(1) Figure 4-4-1, Sample Element Performance Inspection (EPI) Data Collection Tool.

(2) Figure 4-4-2, General Instructions for Completion of Element Performance Inspections (EPI).

(3) Figure 4-4-3, Standard Element Performance Inspection (EPI) Data Collection Tool Questions.

k. Figure 5-1, ATOS Surveillance Reporting Guidelines.

l. Figure 5-2, Memo Regarding Recording and Tracking of En Route Inspections.

m. Figure 5-3, ATOS Data Quality Guidelines.

n. Figure 5-4, Dynamic Observation Reports (DOR) Memorandum.

o. Figure 7-1, Memo Regarding "No" Responses to Data Collection Tool Questions.

p. Figure 8-1, Sample Letter Requesting Participation on a System Analysis Team (SAT).

q. Figure 8-2, System Analysis Teams.

902. OTHER FIGURES. The following ATOS figures are also attached to this appendix:

a. Figure 9-1, ATOS FOIA Policies and Procedures.

b. Figure 9-2, Memorandum Regarding Release of ATOS Documents.

903. ACRONYMS. The following acronyms are used by ATOS.

ACRONYM	DEFINITION
AC	Advisory Circular
ACAT	Air Carrier Assessment Tool
ACO	Aircraft Certification Office
ACRL	Air Carrier Reference Library
AD	Airworthiness Directive
ADE	Air Carrier Designated Examiner
AEG	Aircraft Evaluation Group
AFS	Flight Standards Service
AIR	Aircraft Certification Service
APM	Aircrew Program Manager
AQP	Advanced Qualification Program
A & P	Airframe and Powerplant
ASA	Aviation Safety Assistant
ASI	Aviation Safety Inspector
AST	Aviation Safety Technician
ATOS	Air Transportation Oversight System
AVR	Associate Administrator for Regulation and Certification
CARB	Commercial Airlift Review Board
CAS	Continuous Analysis and Surveillance
CASE	Coordinating Agencies for Suppliers Evaluation
CD	Air Carrier Dynamics
CFR	Code of Federal Regulations
CHDO	Certificate Holding District Office
CMO	Certificate Management Office
CMT	Certificate Management Team

ACRONYM	DEFINITION
CRM	Crew Resource Management
CSET	Certification, Standardization, and Evaluation Team
CSI	Cabin Safety Inspector
CSP	Comprehensive Surveillance Plan
DEPM	Data Evaluation Program Manager
DAS	Designated Alteration Station
DCT	Data Collection Tool
DOD	Department of Defense
DOR	Dynamic Observation Report
DOT	Department of Transportation
DRM	Dispatch Resource Management
EC	Environmental Criticality
ECM	Engine Condition Monitoring
EIR	Enforcement Investigative Report
EPI	Element Performance Inspection
ETOPS	Extended Range Operations with Two-Engine Airplanes
FAA	Federal Aviation Administration
FOIA	Freedom of Information Act
FSAIC	Flight Standards Safety Analysis Information Center
FSAS	Flight Standards Automation System
FSDO	Flight Standards District Office
FSF	Flight Safety Foundation
HAZMAT	Hazardous Materials
IATA	International Air Transport Association
ISIS	Integrated Safety Information System
ISP	Improved Surveillance Planning Process
IWP	Individual Work Program
LLM	Lower Landing Minimums
MEDA	Maintenance Error Decision Aid
MEL/CDL	Minimum Equipment List / Configuration Deviation List
MIS	Mechanical Interruption Summary
MRR	Mechanical Reliability Reports
NPG	National Program Guidelines
NPMC	National Program Management Committee
OEM	Original Equipment Manufacturer
OPSS	Operations Specifications Subsystem
ORA	Operations Research Analyst
OS	Operational Stability
OST	Office of the Secretary of Transportation
OTNA	Operational Training Needs Assessment
PAI	Principal Avionics Inspector
PASS	Professional Airways Systems Specialists
PH	Performance History

ACRONYM	DEFINITION
PI	Principal Inspector
PMC	Program Management Committee
PMI	Principal Maintenance Inspector
POI	Principal Operations Inspector
PPM	Partial Program Manager
PQMI	Process Quality and Management Improvement
PTRS	Program Tracking and Reporting Subsystem
QMC	Quality Management Council
RASIP	Regional Aviation Safety Inspection Program
REDAC	Research, Engineering and Development Advisory Committee
RII	Required Inspection Items
RO	Regional Office
RVSM	Reduced Vertical Separation Minimums
SAI	Safety Attribute Inspection
SAT	System Analysis Team
SAWRS	Supplemental Aviation Weather Reporting System
SDR	Service Difficulty Reporting Subsystem
SIP	Surveillance Improvement Process
SPA	System Process Audit
SPAS	Safety Performance Analysis System
SRR	Specific Regulatory Requirement
SUP	Suspected Unapproved Parts
VIS	Vital Information System
WAN	Wide Area Network
W & B	Weight and Balance

Figure 1-3. Air Carrier Specific Familiarization Briefings.

U.S. Department
of Transportation

**Federal Aviation
Administration**

Memorandum

**ATOS Certificate Management Office (CMO)
Suite 203
45005 Aviation Drive
Dulles, VA 20166**

Subject: INFORMATION: *Air Carrier Specific Familiarization Briefings* Date: 1/18/2001

From: Manager, ATOS Certificate Management Office (CMO)

To: Certificate Management Team Principal Inspectors
Through: Office Managers, Division Managers

The purpose of this memorandum is to provide interim guidance for standardized *Air Carrier Specific Familiarization Briefings*, as part of the baseline training requirements for Air Transportation Oversight System (ATOS) Certificate Management Teams (CMTs) contained in FAA Order 8400.10, Appendix 6. The requirements of this memorandum will be incorporated into the next revision to this order.

Background. The FAA Deputy Administrator's 90-Day Safety Review conducted during the summer of 1996 examined areas of immediate concern to the agency, especially with respect to safety inspection, and made recommendations which could be implemented in the near term. Recommendation 2 of the 90-Day Safety Review called on Flight Standards to "*Improve air carrier guidance systems and follow-up activities to mitigate safety risks and increase the leverage of FAA resources. Ensure that safety information reaches the right people at the right time and continue efforts to improve data quality and analysis"*. The Air Transportation Oversight System (ATOS) was developed in response to that recommendation.

In 1998, the Flight Standards Service Director disseminated a memorandum requiring the ATOS Certificate Management Offices (CMO) to provide carrier-specific training to the geographic inspectors assigned to the certificate management teams. Although the memorandum outlined several content areas that were to be addressed during these sessions, there was little standardization among the ten ATOS CMO. AFS-500 was directed to formalize this training in conjunction with the ATOS Program Office and representatives from the ATOS CMO.

Air Carrier-Specific Familiarization Briefings Policies and Procedures. A formal training course is not feasible due to the uniqueness of each air carrier's operations. However, to ensure that the information each CMT member receives is of sufficient quality and depth, ATOS CMO shall use the following policies and procedures to plan, conduct, and document initial and recurrent *Air Carrier Specific Familiarization Briefings*. These briefings will be provided to each CMT member on initial assignment to the CMT. They

may be conducted one-on-one or for a group of new CMT members at the option of the Office manager. On a yearly basis, generally at the annual planning meeting, each CMT member will receive briefings in applicable subjects to refresh their knowledge and be made aware of any significant changes in the air carrier's operations.

a. **Outline of Subjects:** Appendix 1 of this memorandum contains an outline of subjects that should be covered during initial and recurrent briefings, as appropriate to the specific air carrier, and recommended minimum programmed hour requirements. Additional subjects may be included, at the discretion of individual CMO.

b. **Applicability:** Each inspector assigned to the CMT shall receive briefings in the General Topics and the subjects specific for his or her specialty. Data Evaluation Program Managers (DEPM) and Operations Research Analysts (ORA) shall receive briefings in the General Topics and in the subjects specific to Operations, Cabin Safety, Maintenance, and Avionics.

c. **Methodologies:** The Air Carrier Specific Outline of Subjects may be presented by a combination of lecture, site-visits, and directed self-study. Directed self-study shall be completed during normal working hours and shall not be used for more than 50% of recommended programmed hour requirements. The CMO will provide self-study materials with a cover letter to the inspector's manager.

d. **Air Carrier-Specific Briefing Presenters:** The personnel tasked with conducting lecture portions of the Air-Carrier Specific Familiarization Briefings will be inspectors assigned to the CMT with expertise in the covered subject. FAA Briefing and Presentation Techniques Correspondence Course (Catalog Number 14010) is recommended for presenters without prior experience as instructors.

e. **Assessment:** Satisfactory completion of the briefings will be measured by an open-book oral or written quiz conducted by the CMO.

f. **Record-keeping:** Each CMO will maintain a copy of their Air Carrier Specific Familiarization Briefing Outline and any Self-study Materials. The CMO will complete a record for each CMT member to document successful completion of the briefing. A copy of this record will be forwarded to the CMT member's manager for the inspector's local file.

g. **Funding:** Each CMO is responsible for the costs associated with completing the Air Carrier-Specific Familiarization Briefings.

Authority. The CMO Manager or designee is authorized to determine which subjects in the Air Carrier-Specific Outline of Subjects are applicable to the air carrier's operations, and to determine the applicable amount of lecture and self-study hours.

Responsibility. The CMO Manager is responsible for ensuring that Air Carrier-Specific Familiarization Briefings are provided to all members of the CMT, using the guidance

contained in this memorandum. Each CMT member's Manager is responsible for assigning directed self-study, providing official duty time for the individual to complete the self-study, and ensuring that the assigned self-study has been completed.

Process Measurement. Presenters will conduct appropriate oral or written quizzes to ensure satisfactory completion of the recommended briefing subjects. Completion of each subject is documented in the inspectors' records.

Controls. The CMT member's Manager will receive and assign directed self-study materials after checking available resources. Principal Inspectors will verify that inspectors assigned to the CMT have completed baseline training, including Air Carrier Specific Familiarization Briefings, before assigning them to inspections.

Interfaces. Principal Inspectors will coordinate any necessary changes to the Outline of Subjects for the Briefings on an annual basis. CMT members will provide the ATOS CMO with feedback on the Air Carrier-Specific Familiarization Briefings for continuous improvement of ATOS processes.

The substance of this memorandum was developed by an inspector work group and was coordinated with Linda Goodrich, Region IV, Professional Airways Systems Specialists. Please forward a copy of this memorandum and the attachment to all ATOS CMT Managers and Principal Inspectors.

Sincerely,

Larry Youngblut
Manager, ATOS CMO

OUTLINE OF SUBJECTS

GENERAL TOPICS - All specialties
(Recommended Minimum Hours – 8)

1. OVERVIEW OF AIR CARRIER
- **Brief History**
  - Mergers
  - Acquisitions
  - Financial Status (i.e. bankruptcies)
  - Compliance Attitude
  - Corporate Headquarters Location
  - Main Base Location
  - Corporate Philosophy
- **Air Carrier Demographics**
  - Key personnel (names/phone numbers)
  - Organization chart
  - Major Programs
  - Location of Hubs
  - Location of Training Bases
  - Location of Maintenance Facilities
  - Personnel Strengths
  - Agent for Service
  - Communications
  - Special operations
  - Fleet Demographics
  - Aircraft Numbering System
- **Areas of Operations**
  - Type/Fleet type of activity
  - Concentrations of Activity
- **Code sharing/wet lease/interchange**
  - Airline participants
  - Foreign flight attendant supernumeraries
- **Future Plans of the Air Carrier**

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2. CERTIFICATE MANAGEMENT TEAM
- **Key Personnel**
  - Listing (name and phone number of all)
  - PI's (including PSI and Regional Hazmat)
- **Policies and Procedures for CMT**
  - Responsibility for coverage of incidents and occurrences.
- **Individual Interests / Specialties**
  - Type ratings, areas of interest, background and experience.
- **Communications**
  - Types of information to be requested directly from air carrier (Points of Contact)
  - Information available from the CMO
  - Points of Contact and Protocol

GENERAL TOPICS - All specialties (continued)

3. BACKGROUND OF CSP
- **Special Emphasis Areas**
  - Results of ACAT/SSAT
  - New and Pending Issues

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4. COMPANY MANUALS
- **Overview of Air Carrier Manual System**
  - Manual Numbering
  - Master listing of all parts of the air carrier's manual
  - Where to find the master listing
  - Where certain manuals are located
- **Types and Identification of Manuals**
  - Hard copies
  - Computerized manuals; CD ROM
- **Location of Manuals**
  - Required on aircraft
  - Required software if applicable
  - Required for crewmembers
  - Microfiche reader
  - Required at stations
- **Distribution and Revision**
  - Determining current revision status
  - Use of computer if applicable
  - What method is used to issue revisions?
  - Tracking responsibilities
- **Alerts and Bulletins**
  - Method to determine current status
  - Transmission of bulletins and revisions

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5. SECURITY AND ACCESS
- **Access to Ramp and Facilities**
  - Site specific requirements
  - Air Carrier's security coordinators
- **ID Badges**
- **Cockpit Keys**
- **Security Alerts for Travel Advisories**

6. HAZARDOUS MATERIALS
- **Acceptable Shipments**
- **Documentation**
- **Location verification**
- **Company Material (COMAT)**

GENERAL TOPICS - All specialties (continued)

7. EN ROUTE PROCEDURES

- **Jump seat authorization and Procedures**
  - Jump seat operation
  - Radio operation; Headset location and use
- **Requirement for International Travel**
  - Country Clearance Forms
  - Passport and Visa

8. FLIGHT DECK PROCEDURES

- **Checklist location and use**
  - Cockpit flows
- **Quick Reference Handbook (QRH) location and use**
- **Safety briefing**
- **Crew Briefing; communication**
- **Required paperwork / documentation**
  - Location of logbooks (flight deck / cabin)
  - Location of MEL
  - Airworthiness release
  - Placards
- **Unique fleet/air carrier procedures**
- **ACARS**
  - Weight and Balance
  - Release Amendments
  - Communications

9. CABIN PROCEDURES

- **Exit Seating**
- **Emergency Equipment**
  - Location
  - Pre-flight if applicable for flight attendants
- **Markings and Placards**
- **Carry-On baggage**
- **Special Procedures**
- **Medical Emergencies**
  - Medical Oxygen
  - Medlink
  - AED (defibrillators)
- **Couriers**
- **Cargo/Animal Handlers**
- **Cockpit/Cabin Communications**
- **Carriage of Weapons**
  - Forms and procedures

SPECIFIC TOPICS - All specialties

(Minimum Recommended Hours –8)

1. AIR CARRIER PROGRAMS

- **Deicing**
  - General Procedures and Training
  - Paperwork
- **Fueling**
  - General Procedures and Training
  - Paperwork
  - Passenger handling during fueling
  - Bonding and grounding
- **Pushback/Powerback Procedures**
- **International Procedures**
  - Crew check-In time
  - Crew Complement
  - Flight/duty and rest computation
  - General Declaration
  - Passport and Visa Requirements
- **Special and Ferry Flight Procedures**
- **Cargo Operations**
- **Security**
  - Hijack procedures
  - Interference with crew members

2. RECORDS AND REPORTING

- **General**
  - Format: Paper, microfiche, electronic
  - Electronic signatures
  - Security Issues
  - Custody and retention

3. OPERATIONS SPECIFICATIONS

- **Exemptions and Deviations**
- **Special Areas of Operations**
- **Special Authorizations and Programs**
  - Power back procedures
  - Single engine taxi
  - Extended over water operations with two engine airplanes (ETOPS)
  - Areas of Magnetic Unreliability (AMU)
  - Lower Landing Minimums (LIMP)
  - Minimum Navigation Performance Standards (MNPS)
  - Flight Operations Quality Assurance (FOQA)
  - Aviation Safety Action Program (ASAP)
  - Reduced Vertical Separation Minimums (RVSM)
  - Cat III Procedures

SPECIFIC TOPICS - All specialties (continued)

4. STATION FACILITIES
- **Manuals**
- **Fueling Equipment and Facilities**
- **Maintenance Support**
- **Contract Services**
- **Passenger and Baggage Screening**
- **Cargo**
- **Marshalling and Ground Handling**

OPERATIONS AND CABIN SAFETY TOPICS
(Recommended Minimum Hours – 8 to 16)

1. FLIGHT OPERATIONS PROGRAMS
- **Flight Planning and Documentation**
  - Performance and Operating limits
  - Operational Release
  - Format of the Release Package
  - Supplemental operations
  - Passenger Manifest
  - Weather
  - Weight and Balance
  - Documentation Transmittal
- **Dispatch and Flight Following**
  - Centralized Procedures
  - Shared Procedures
- **MEL/CDL System/Deferral Process**

2. TRAINING AND QUALIFICATIONS
- **Overview**
  - Operations specifications /specific training requirements
  - Types of training conducted (wet lease, AQP)
- **Training Facilities and Equipment**
- **Key Fleet Personnel**
- **Documentation of Personnel Requirements and Training**
- **Outsource Training**

3. REST AND DUTY TIME
- **Flight Crew**
  - Records and Reporting
  - Scheduling
- **Cabin Crew**
  - Records and Reporting
  - Scheduling

OPERATIONS/CABIN SAFETY TOPICS (Cont.)

- **Dispatch**
  - Records and Reporting
  - Scheduling

4. CABIN SAFETY
- **Flight Attendant Duties/Cabin**
  - Supernumeraries
  - Wet Lease operations
  - Reporting Discrepancies
  - Seatbelt discipline
  - Child Restraint
  - Smoking requirements
  - Number of Required Flight Attendants
  - Briefing Requirements
  - Reporting of Mechanical discrepancies
  - Sterile cockpit
- **Passenger Handling**
  - Interference with crewmember programs
  - Passengers who may appear intoxicated
- **Carry-On Baggage**
  - Screening
  - Carry-On Baggage Program
  - Regional Airline differences
- **Exit Seating**
  - Announcements; Briefing Cards
  - Interpreters
- **Gate Agent Procedures**
  - Passenger Service
  - Supplemental Operations
- **First Aid and Medical**
  - Medlink procedures
  - CPR Training
  - Equipment Required
  - Other Equipment

MAINTENANCE AND AVIONICS TOPICS
(Recommended Minimum Hours – 8 to 16)

1. MAINTENANCE SYSTEMS
- **Air Carrier Procedures**
  - General Procedures Manual
- **SUPS/Parts and Materials**
  - Site Receiving inspection
  - Scrap Parts Procedures
- **Ground Handling/Taxi/Run Up Procedures**
- **Calibrated Tools and Test Requirements**

MAINTENANCE AND AVIONICS TOPICS (Cont.)

- **Maintenance Inspections**
- **Required Equipment**
- – Aircraft
- – Fly away kit
- – Maintenance library

2. RECORDS AND REPORTING

- **Maintenance Logbooks/Recording**
- **Aircraft Records/Aircraft Listing**
- **Mechanical Interruption Summary**
- **Mechanical Reliability Reports**

3. OPERATIONS SPECIFICATIONS

4. STATION FACILITIES

- **Parts and Equipment**
- **De-icing Procedures**

5. MAINTENANCE ORGANIZATION

- **Maintenance Control**
- **Engineering Systems and Forms**
- **Internal Evaluation and Quality Assurance**
- **AD Management**
- **Training Programs**
- – Overview of qualifications and training
- – Operations Specifications/specific training
- – Types conducted
- – Training facilities/equipment
- – Key Personnel
- **Contract Maintenance and Repair Stations**
- – Training Verifications

MAINTENANCE AND AVIONICS TOPICS (Cont.)

Airworthiness Release

- – Format of the release package
- – Supplemental operations
- – Maintenance Releases
- **Weight and Balance**
- **MEL/CDL**
- – Preamble; General; Revision Status
- – Deferral and Tracking
- – Coordination with Maintenance Control
- – Action Required for Inoperative Items
- – Interim Actions; DENT Program
- **Special Programs**
- – Extended Over water Operations with two engine aircraft (ETOPS)
- – Area of Magnetic Unreliability (AMU)
- – Lower Landing Minimums
- – Minimum Navigation Performance Standards (MNPS)
- – Aviation Safety Action Program (ASAP)
- – Flight Ops Quality Assurance (FOQA)
- – Reduced Vertical Separation (RSVM)
- – Reliability Program
- – Repeat Maintenance Items
- – Required Inspection Items (RII)
- – Continuing Analysis Surveillance (CASS)
- – Coordination Agency for Supply Evaluation (CASE)
- – Corrosion Prevention Control Program (CPCP)
- – Aging Aircraft Program
- – SID/SSID

Figure 2-1. ATOS Surveillance Planning Guidelines.

Prior to annual surveillance planning meeting:

- **Designate CMT Meeting Coordinator.**
  - *The supervisor designates a member of the CMT as meeting coordinator.* Although any CMT member can serve in this position, it is recommended that the CMT select an individual at the CHDO/CMO with organizational and leadership skills.
  - Pre-meeting planning should begin well in advance of the planned meeting date.

- **Notify ATOS CMO.**
  - CMTs will notify the ATOS CMO of the planned meeting date and the name of this year's coordinator as soon as possible.
  - Planning assistance will be provided with a coordinator telecon, planning checklists and personal visits with each CMT.
  - A representative from the ATOS CMO will attend each annual planning meeting.

- **Draft ACAT and notify CMT members that drafts are available.**
  - *The principal inspectors are responsible for collecting and organizing the information and data necessary to complete the draft version of the ACAT.*
  - Principal inspectors complete the ACAT to draft status based on all data, expertise, and experiential knowledge that are available.
  - Data packages are being prepared by analysts and will be provided to each CMT, with guidance on their use.
  - Data review should include a query of "no" responses from completed SAI and EPI.
  - When the draft ACAT is complete, Principals should notify the CMT members that the drafts are available and request that CMT members provide comments via the automation system within a reasonable time period (2 weeks at a minimum).

- **CMT members provide comments on ACAT.**
  - Comments on the ACAT should reference the specific element and risk indicator. In addition, all comments should address the Who, What, Where, When, How, and Why.

- **Review comments and revise drafts.**
  - The principal inspectors review CMT members' comments and, after considering all the comments, the PI revise the draft ACAT, as necessary based on those comments, prior to the annual planning meeting.
  - The PI may begin working on the draft CSP at this time and get as much preliminary work done as possible prior to the meeting.

During the Annual Meeting

- **Review draft ACAT and CSP with CMT at annual meeting.**
  - The order makes it very clear that the ACAT and CSP may not be finalized prior to the annual planning meeting.
  - *The PI brings the draft version of the ACAT and CSP to the annual planning meeting where they are reviewed and discussed by the appropriate CMT sub-groups.*
  - *The process of finalizing the ACAT and CSP at the meeting involves several steps.*

- **Divide CMT into sub-groups.**
  - Ideally, CMT members from all specialties attend a combined annual meeting.
  - After the preliminary meeting activities, the CMT is divided into two-subgroups to review the appropriate draft versions of the ACAT and CSP.
  - Sub-groups should be briefed on the air carrier information used to prepare the ACAT.
  - Whatever process used should allow all subgroup members a chance to share information at the meeting.

- **Share information between sub-groups.**
  - Prior to saving the ACAT as final, the POI and CSI should review the completed draft of the Airworthiness ACAT, and the PMI and PAI should review the completed draft of the Operations ACAT.
  - This information sharing is critical to gaining a complete assessment of the carrier, and may result in some additional adjustments to the tools prior to their being finalized.

- **Complete Draft of Comprehensive Surveillance Plan (CSP)**
  - *Both Operations and Airworthiness specialties must complete the CSP. The Principal Inspectors identify and record the surveillance requirements for each specialty.*
  - Although the order mentions development of the CSP as one of the activities for the annual planning meeting, there is no specific written guidance on how CMT members should be involved in this process.
  - The PI should review the draft CSP with the CMT members and obtain their input on the tentative plans for the frequency of inspections and identification of individuals for SAI teams and EPI assignments.
  - The PI may need additional time after the meeting to complete their instructions for specific inspection and finalize the plan.

- **Obtain information about CMT members' experience and training.**
  - The annual meeting provides the opportunity for PI to obtain information about CMT member's prior experience and training.
  - The PI may wish to ask for volunteers who would be interested in working on specific SAI teams or EPI.

After the surveillance planning meeting:

- **Principal Inspectors are responsible for developing the final CSP.**
  - *Principal inspectors are responsible for effectively identifying inspectors to accomplish the CSP and for providing instructions that target the CSP activities to the specific needs of their air carrier.*
  - The PI's most important work on the CSP typically begins after the meeting in order to coordinate the efforts of the entire CMT in accomplishing the surveillance needs for their air carrier

- **Identify inspector resources.**
  - In order to finalize the CSP, PI need to identify the appropriate teams or individuals to perform each inspection.
  - Factors the PI should consider during inspector identification are training, experience, qualifications, geographic location, availability, and workload.

- **Determine if resources are adequate.**
  - *If the PI determine there is insufficient staffing to accomplish all inspections in the CSP, they elevate the issue via a memo to their regional office through the CHDO/CMO Manager for resolution.*
  - Insufficient staffing involves not just numbers of inspectors, but where those inspectors are located and what qualifications are needed.
  - The PI play an important part in identifying the need for additional CHDO/CMO staffing, additional or relocated geographic staffing, and essential training requirements for CMT members.
  - This information should be provided throughout the year to the PI's manager.

- **The CSP is not driven by availability of resources.**
  - The CSP is not planned or retargeted based on the availability of resources.
  - If the required resources are requested but not provided, the inspections remain in the CSP as planned but unassigned by selecting the "Resources Not Available (RNA)" option.
  - An inspection designed as "RNA" can be changed to an inspector assignment any time additional resources become available.

- **Instructions help to ensure timely, high-quality inspection data.**
  - The CSP provides PI with a plan that is tailored to the current surveillance requirements for the specific air carrier. The key is for Principal Inspectors to provide instructions to ensure that activities are performed at the appropriate locations at the appropriate times to answer the questions on the job aid in a reasonably short timeframe.
  - Instructions help the PI to prioritize inspections and set timelines for starting and completing the activities by certain dates.
  - The CSP should include guidance on the type, location, and timing of inspection activities. The PI may request that the activities take place at specific locations or involve specific makes/models.

- **The purpose of surveillance is to obtain accurate, continuous, real-time data to support decision-making.**
  - *The purpose of surveillance is to provide an accurate, real-time, and comprehensive evaluation of the safety status of the air carrier's systems and compliance with the Federal Aviation Regulations.*
  - SAIs, EPIs and DORs are not comparable to the "R" and "P" activities assigned under the NPG work plans.
  - Inspectors are not evaluated by how many activities they enter into the ATOS data repository by a certain date.
  - Inspectors should not leave EPI open just so they have a place to report everything they observe during the normal course of their duties.
  - Observation of air carrier operations not included in a surveillance task may be captured as an investigative activity under PTRS.

- **Pre-planning and preparation are essential in ATOS inspections.**
  - Data Collection Tools should be studied to determine the level of observation needed for each particular element.
  - It is not appropriate for CMT members to perform random work activities and then try to figure out which EPI or SAI to use for reporting those activities.
  - If a CMT determines that more EPIs are necessary as the year progresses or if an additional risk develops, the CSP can always be re-targeted.

Safety Attribute Inspections (SAI)

- **Planning the number of Safety Attribute Inspections.**
  - The purpose of an SAI is to ensure that a particular area of an air carrier's operation incorporates system safety by inclusion of the six safety attributes and that it also complies with the applicable regulations.
  - The SAI captures baseline information (or certification status) on the systems that are in place and the EPI was intended to validate the performance of the system.
  - CMT should plan SAI for any subsystems/elements where there are significant operator changes or where there are safety concerns.
  - SAI should be accomplished in the order of priority that is generated by the ACAT.
  - ATOS CMT should have completed an SAI for each element within 3-5 years of starting surveillance using the ATOS, and then plan to accomplish an SAI for each element at least every five years.
  - If there are no significant changes in the air carrier's systems then there should not be a reason to plan another SAI outside of this rotational schedule, unless driven by risk assessment.

- **SAIs are Team Inspections.**
  - *SAI are executed at the element level, usually planned for at the subsystem level, and accomplished by a team of inspectors.* SAI are team inspections, with each team responsible for a subsystem or portion of a subsystem, under the leadership of a team coordinator.
  - This structure allows the CMT to assess the entire subsystem and obtain a "big picture" look at how the air carrier operates. When some CMT decided to assign elements from different subsystems to an SAI team, this concept was lost.

- **The SAI Team Coordinator (TC) is an important position.**
  - SAI Team Coordinators play an important role in organizing and coordinating SAI team activities.
  - The TC is responsible for ensuring that activities, such as personnel interviews, are not repetitive or redundant, and that all activities are completed to accurately answer the questions on the SAI.
  - The TC is a leadership role that should be assigned to an experienced inspector, with a solid knowledge of the air carrier, who is based near the location where most SAI activities will take place.
  - Teams can be comprised of inspectors with varying backgrounds, experience, and geographic locations.

Element Performance Inspections (EPI)

- **Planning the number of Element Performance Inspections.**
  - *EPI are designed to determine if an air carrier adheres to its written procedures and controls for each system element and that the established performance measures for each system element are met.*
  - In other words, is the carrier following their procedures and are those procedures accomplishing regulatory compliance and safety?

- **Determine frequency of EPI using EPI values from ACAT.**
  - Under ATOS, the structured CSP places inspector resources where they are needed most.
  - If the PI determines that additional EPI are required above the values generated by the ACAT, he or she should write a description of the reason for increasing the number of EPI in the "notes" section of the CSP.
  - In the event that an element does not apply to the air carrier because they do not conduct that type of operation, the EPI Minimum Frequency, Initial Plan EPI, and Current Plan EPI column entries should be disregarded. Do not assign an inspector name to one of these elements, select "Element Not Applicable."

- **Elevate number of inspections based on sound data analysis.**
  - There may be valid reasons why a PI might want to elevate the number of inspections that are produced by the ACAT, but the PI should avoid arbitrarily elevating the number of inspections when that decision is not based on sound data analysis. Use the "notes" column to record the reasons for elevating the number of inspections.

- Any area where significant risks have been identified will be elevated to heightened frequency by the ACAT and have five EPI assigned.
- The PI can give instructions that these heightened EPI are high priority and request accomplishment by a certain date.
- Retargeting is always an option should sound data analysis indicates a need for additional EPI beyond those originally calculated by the ACAT.

- **Heightened inspections are generated for areas of concern.**
  - These are inspections that are generated because there is an area in the ACAT where the CMT has expressed concerns.
  - Since they are heightened there is probably a need to have the surveillance results reasonably quick.
  - The inspector resources should be concentrated on accomplishing at least one of each heightened EPI within a short timeframe, 30-60 days of the CSP.
  - Upon receipt of the quality data from the heightened EPI, the PI is able to make a decision on what additional actions may be needed.

- **Semi-annual, Annual, and Quarterly Inspections.**
  - These inspections are generated by the ACAT with other than a heightened status.
  - Since the purpose of an EPI is validation of an air carrier system to ensure that it is working, the PI should provide guidance for completion of these inspections based on environmental factors. For example:
    - Activities for an EPI on carry on-baggage would be most effective if conducted at those stations with high passenger loads and during times when travel is high.
    - Activities for EPI on maintenance facilities should be accomplished when there is maintenance being performed.
    - Activities for EPI on deicing should be conducted during environmental times that icing is likely to occur.
  - To ensure that inspectors do not leave an EPI open for a time that is longer than necessary to collect quality data, instructions should include a targeted completion date.
  - PI can use queries to track the completion of EPI activities.
  - Managers and supervisors should monitor the inspector's progress towards completing the EPI by the date requested.

Retargeting

- **Retargeting is an integral part of the dynamic CSP.**
  - The purpose of Retargeting is to provide the CMT with the means to dynamically redirect surveillance at any time in response to changing conditions at an air carrier. These may include changes in the airline's status or situation (changes in management or labor relations); accidents and incidents; or observations made by Inspectors during surveillance activities.
  - Anytime surveillance data identifies a problem or other external data triggers an issue, the PI assesses the information and determines any retargeting requirements. The important point here is that the CSP is a dynamic plan. By using the retargeting functionality and the other automation features, the plan can be continuously updated based on the quality data collected by the CMT members.
  - Retargeting should not be conducted in response to CMT internal considerations such as staffing or budget constraints. A CSP can be retargeted as often as needed, however the Retargeting process is not intended to be used on a calendar basis as a means of closing out a planning cycle.
  - In addition, it is not advised to continuously retarget the same elements within a CSP (EPI Plan) in order to generate additional inspections. An acceptable solution is to consider conducting a thorough system assessment, such as a SAI, for those elements.
  - If retargeting is deemed appropriate to focus additional resources in an area of concern, the PI must determine which elements of the ACAT are related to the area of concern and generate new versions. This can be done for the entire air carrier or for selected systems, sub-systems, or elements.
  - One other point of clarification, Retargeting does not automatically delete or remove any information contained in the current CSP.
  - Retargeting is not a negative thing. It doesn't mean that something was faulty in the original CSP. It is perfectly normal for a CMT to retarget several times a year based on the analysis of data or on changing circumstances.

- **Inspector assignments can be changed without retargeting.**
  - This includes changing from an "RNA" designation to an inspector or vice versa and re-assigning an inspection that has not yet been started.

FIGURE 2-2. AIR CARRIER ASSESSMENT TOOL (ACAT).

INTRODUCTION

The ACAT is an automated tool that provides online features to assist in completion, as well as calculating the information included on the ACAT Results sheet. The ACAT is a matrix designed to analyze and assess the elements of an air carrier's systems using a series of risk indicators. The ACAT provides a method to determine an assessment value that is applied to the Element Performance Inspection (EPI) Frequency Baseline for each element of surveillance contained in the Comprehensive Surveillance Plan (CSP).

The ACAT is structured into two major sections: Airworthiness and Operations. Each ACAT section includes a Results sheet designed to compile the results from the ACAT and provide the Principal Inspectors (PI) with Assessment Values for each element.

ACAT DESCRIPTION

The ACAT is structured as a matrix, with rows, columns, and intersecting cells. The rows associated with both sections of the ACAT include the air carrier system elements to be assessed for each specialty. Together there are a total of 105 elements of surveillance associated with the Airworthiness and Operations sections of the ACAT. There are thirty-one risk indicators that make up the Airworthiness ACAT and twenty-nine risk indicators that make up the Operations ACAT. A risk indicator is a safety and/or performance related data or information group that reflects an area of potential risk.

An air carrier complexity factor considers the size and complexity of the carrier to determine the baseline number of EPI that the ACAT generates in the CSP. Current ATOS carriers will be grouped into one of three categories. Each of these categories will have its own weighting factor to determine the number of EPI to be accomplished within the CSP.

The ACAT also includes a Results sheet. The purpose of the ACAT Results sheet is to compile the results for all four assessment subject areas (i.e., Operational Stability, Air Carrier Dynamics, Performance History, and Environmental Criticality) for each surveillance element.

ACAT INSTRUCTIONS

PI will complete all appropriate indicator-to-element assessments on the ACAT. This can be done at one sitting or may be an iterative process that requires review of previously gathered data. PI/CSI will complete their sections of the ACAT by marking a check in those matrix cells where there is a concern that a real or potential problem exists which could contribute to a failure in the element, sub-system, or system.

Each ACAT - Airworthiness and Operations - includes a Results sheet at the end. The ACAT Results sheet is a three-part matrix. One part of the matrix is designed to compile the individual element Assessment Actual Total made on the ACAT by category (System Stability and Operational Risks) and by subject area (Operational Stability, Air Carrier Dynamics, Performance History, and Environmental Criticality) for each element row. One part of the matrix is designed to capture the Percentage for each element into the appropriate Assessment Value category, which automatically assigns an Assessment Value of -1, 0, +1, or +2. One part of the matrix captures a Weighted Percentage per element.

There are four assessment actual totals per element (one for each of the four indicator subject areas). Once all of the line items on the ACAT have been assessed, a total will be automatically computed for each of the risk indicators for each surveillance element and will appear in the appropriate *Assessment Actual* column. For example, to compute the Performance History (PH) total for the (1.1.1) Aircraft Airworthiness Requirements element, the total number of actual check marks made across the element row for each of the Performance History risk indicators on the ACAT will be automatically computed. The number will appear in the *Assessment Actual PH* column on the ACAT Results sheet.

The *Assessment Actual Total* column is computed by adding the numbers in the four *Assessment Actual* (OS, CD, PH, and EC) columns for an element row (e.g., 1.1.1 Aircraft Airworthiness Requirements). The total for each element row is automatically computed in the *Assessment Actual Total* column. The *Percentage* column is computed by dividing the *Assessment Actual Total* column by the *Assessment Actual Total Possible* column for each element, then multiplying the result by 100, and rounding the product to the nearest whole number to formulate the percentage.

Once the *Percentage* column for all element rows has been computed and displayed on the Results sheet, the *Assessment Value* column is also displayed. The *Assessment Value* column is determined by the percentage computed in the *Percentage* column. Based on the range into which the percentage falls, the corresponding value factor will appear in the *Assessment Value* column:

0-5%	=	-1
6-10%	=	0
11-15%	=	+1
16%+	=	+2

For example, if the percentage is fourteen (14) percent, the *Assessment Value* column will automatically display a +1 assessment value.

The Assessment Value for each element is automatically transferred to the air carrier's CSP-EPI. The Assessment Value is used to reduce, maintain, increase, or heighten the EPI Frequency Baseline for each surveillance element in the plan.

The *Weighted Percentage* column is automatically computed for each element by multiplying the *Criticality Weight* column by the *Percentage* column. An average percentage for each sub-system row is also computed and displayed in the *Weighted Percentage* column. This sub-system weighted percentage is used to determine the sub-system *SAI Priority*, which is automatically placed on the CSP-SAI. The weighted percentage is converted from a percentage to a numeric priority of 1 through 10; 1 being the sub-system with the greatest level of concern and 10 (for Airworthiness) and 7 (for Operations) the sub-system with the least level of concern.

After the *Weighted Percentage* column is computed for each element, an average will be computed for all elements and displayed in the appropriate Total Airworthiness Result or the Total Operations Result cell. Over time, the total Weighted Percentage for Airworthiness and Operations compiled through the ACAT will provide the CMT with trend data that can be used to further enhance the assessment and planning processes. Once the ACAT is finalized, the PI/CSI will save it as "Final" in automation. Detailed descriptions and instructions for the ACAT, the ACAT Results sheet, and the risk indicator criteria are presented on the following pages.

ACAT	
ITEM	**DESCRIPTION/INSTRUCTIONS**
CRITICALITY BASELINE	This column identifies the criticality baseline for the elements as identified in the CSP. The criticality baseline will differ for each element. It will be categorized as High, Medium, or Low. • High = A high likelihood that a failure in this element could lead to an unsafe condition. • Medium = A moderate likelihood that a failure in this element could lead to an unsafe condition. • Low = A low likelihood that a failure in this element could lead to an unsafe condition.
AIRWORTHINESS OR OPERATIONS ELEMENTS	This column identifies the air carrier elements for the two specialties, Airworthiness (Maintenance and Avionics) and Operations (Operations and Cabin Safety), for the air carrier systems and sub-systems. The elements vary by specialty.
SYSTEM STABILITY CATEGORY	The System Stability category addresses the state of balanced constancy and safety that results when an air carrier effectively manages both their organization and their environment; those that they control directly and those over which they have no direct control.
OPERATIONAL STABILITY SUBJECT AREA	The Operational Stability subject area addresses those aspects of the air carrier organization and environment over which the air carrier has no direct control and that, when managed effectively, could enhance system stability and safety. There are seven Operational Stability risk indicators and related columns.

ACAT

ITEM	DESCRIPTION/INSTRUCTIONS
OPERATIONAL STABILITY RISK INDICATORS: • SPAS Management/Economic Indicators • Change in Air Carrier Management • Turnover in Personnel • Reduction in Workforce/Layoffs/Buy-Outs • Rapid Expansion/Growth • Merger or Takeover • Labor-Management Relations	Read, review, and analyze the criteria associated with each risk indicator. For each risk indicator, determine if the criteria apply to each element. Make a check in those matrix cells where there is a concern that a real or potential problem exists that could contribute to a failure in the element. Where the assessment does not indicate a real or potential problem exists, leave the cell blank.
AIR CARRIER DYNAMICS SUBJECT AREA	The Air Carrier Dynamics subject area addresses those aspects of the air carrier's organization and environment that the air carrier directly controls and that could be used to enhance system stability and safety. There are ten Air Carrier Dynamics risk indicators and related columns.
AIR CARRIER DYNAMICS RISK INDICATORS: • New/Major Changes to Program • Safety System • Internal Evaluation Program • Best Practices • Resource Management Training • Risk Management • Cooperative Relationship with FAA • Human Factors **Airworthiness Only:** • Inspection Department/System • CAS System	Read, review, and analyze the criteria associated with each risk indicator. For each risk indicator, determine if the criteria apply to each element. Make a check in those matrix cells where there is a concern that a real or potential problem exists that could contribute to a failure in the element. Where the assessment does not indicate a real or potential problem exists, leave the cell blank.
OPERATIONAL RISKS CATEGORY	The Operational Risks category addresses the operational risks that affect the maintenance and operations of the air carrier.
PERFORMANCE HISTORY SUBJECT AREA	The Performance History subject area addresses the results or outcomes of air carrier operations over time. There are seven Performance History risk indicators.

ACAT

ITEM	DESCRIPTION/INSTRUCTIONS
PERFORMANCE HISTORY RISK INDICATORS: • Enforcement Actions • Accidents/Incidents/ Occurrences • DoD/RASIP • Self-Disclosures • Safety Hotline/Complaints • New Entrant Air Carrier • SPAS Trend Indicators	Read, review, and analyze the criteria associated with each risk indicator. For each risk indicator, determine if the criteria apply to each element. Make a check in those matrix cells where there is a concern that a real or potential problem exists that could contribute to a failure in the element. Where the assessment does not indicate a real or potential problem exists, leave the cell blank.
ENVIRONMENTAL CRITICALITY SUBJECT AREA	The Environmental Criticality subject area address those aspects of the air carrier's surroundings that could lead to or trigger a failure in one of their systems, sub-systems, or elements and potentially create an unsafe condition. There are seven Environmental Criticality risk indicators.
ENVIRONMENTAL CRITICALITY RISK INDICATORS: • Age of Fleet • Varied Fleet Mix • Complexity of Aircraft • Outsource (M, T, GH) • Seasonal Operations • Relocation/Closing of Facilities • Lease Arrangement	Read, review, and analyze the criteria associated with each risk indicator. For each risk indicator, determine if the criteria apply to each element. Make a check in those matrix cells where there is a concern that a real or potential problem exists that could contribute to a failure in the element. Where the assessment does not indicate a real or potential problem exists, leave the cell blank.

ACAT RESULTS SHEET

ITEM	DESCRIPTION/INSTRUCTIONS
AIR CARRIER	The name of the air carrier for which the assessment is being conducted.
ASSESSMENT YEAR	The four-digit fiscal year in which the assessment is being conducted.
PI(S)/CSI	The name of the PI(s)/CSI.
CHDO/CMO	The name of the CHDO/CMO.
AIR CARRIER DESIGNATOR	The Air Carrier Designator.
AIRWORTHINESS OR OPERATIONS ELEMENTS	This column identifies the air carrier surveillance elements for Airworthiness and Operations that support the air carrier systems or sub-systems.
ASSESSMENT ACTUAL: OS, CD, PH, EC, TOTAL, TOTAL POSSIBLE	The total number of check marks for each assessment actual subject area (OS, CD, PH, and EC) for each element row (e.g., 1.1.1 Aircraft Airworthiness Requirements) will be computed and displayed in the corresponding ASSESSMENT ACTUAL column (OS, CD, PH, and EC). Once they all have been computed, the ASSESSMENT ACTUAL TOTAL column will sum the ASSESSMENT ACTUAL column and display the ASSESSMENT ACTUAL TOTAL column.
PERCENTAGE	The ASSESSMENT ACTUAL TOTAL column will be divided by the ASSESSMENT ACTUAL TOTAL Possible column for each element. The result will be multiplied by 100, rounded to the nearest whole number, and the result will be displayed in the PERCENTAGE column.
ASSESSMENT VALUE: • 0-5% = -1 • 6-10% = 0 • 11-15% = +1 • 16%+ = +2	For each element row, the PERCENTAGE column will indicate the corresponding factor, which will be displayed in the ASSESSMENT VALUE column. For example, if the Percentage is four (4%), which would fall into the 0-5% range, the value displayed would be -1.
CRITICALITY WEIGHT	The CRITICALITY WEIGHT column corresponds to the CRITICALITY BASELINE column on the CSP. The criticality weight is used in computing the WEIGHTED PERCENTAGE column and provides representation of the criticality for each element into the criticality weight. The criticality weight may differ for each

ACAT RESULTS SHEET

ITEM	DESCRIPTION/INSTRUCTIONS
	element. It will be categorized as 3, 2, or 1: • 3 = High Criticality Baseline • 2 = Medium Criticality Baseline • 1 = Low Criticality Baseline
WEIGHTED PERCENTAGE	The WEIGHTED PERCENTAGE column is computed by multiplying the PERCENTAGE column by the CRITICALITY WEIGHT column. When this process is complete for all elements, the average of all the WEIGHTED PERCENTAGE element rows will be displayed in the TOTAL AIRWORTHINESS RESULT cell or TOTAL OPERATIONS RESULT cell, as appropriate.
PI/CSI APPROVAL	The PI(s)/ CSI who completed the ACAT will indicate their approval that the ACAT is complete.
DATE	The date that the PI(s)/ CSI saved the ACAT as "Final."
NOTES	Any narrative notes about the assessment provided by the PI(s)/CSI who completed the ACAT should be entered here.

ACAT RISK INDICATOR CRITERIA

The ACAT is designed so that each surveillance element is assessed by multiple indicators. The indicators are divided into two major categories - System Stability and Operational Risks - designed to reflect the fact that air carrier systems are impacted by both internal and external events. Each major category is further sub-divided into two subject areas; these subject areas are designed to focus the indicators on those operational, performance, and environmental risks most likely to impact an air carrier's systems. The System Stability category is divided into Operational Stability and Air Carrier Dynamics. The Operational Risks category is divided into Performance History and Environmental Criticality. The complete set of indicators is designed to provide the Principal Inspector with the means to assess the elements and determine the system-based surveillance requirements for an air carrier's annual CSP. The definitions and criteria for each of the thirty-one indicators are provided on the following pages.

Summary of Risk Indicators

SYSTEM STABILITY	OPERATIONAL RISKS
OPERATIONAL STABILITY	**PERFORMANCE HISTORY**
SPAS Indicators	Enforcement Actions
Change in Air Carrier Management	Accidents/Incidents/Occurrences
Turnover in Personnel	DoD/RASIP
Reduction in Workforce/Layoffs/Buy-outs	Self-Disclosures
Rapid Expansion/Growth	Safety Hotline/Complaints
Merger or Takeover	New Entrant Carrier
Labor-Management Relations	SPAS Trend Indicators
AIR CARRIER DYNAMICS	**ENVIRONMENTAL CRITICALITY**
Inspection Department/System (A/W)	Age of Fleet
New/Major Changes to Program	Varied Fleet Mix and Mixed Configuration
CAS System (A/W)	Complexity of Aircraft
Safety System	Outsourcing
Internal Evaluation Program	Seasonal Operations
Best Practices	Relocation/Closing of Facilities
Resource Management Training	Lease Arrangements
Risk Management	
Cooperative Relationship with FAA	
Human Factors	

SYSTEM STABILITY/OPERATIONAL STABILITY RISK INDICATORS

SPAS Management/Economic Indicator(s)

The SPAS Management Indicator(s), and SPAS Economic Indicator(s), provide subject-specific indications of the current system and operational stability of the air carrier. The SPAS Management Indicator(s) incorporate the SPAS performance measures related to changes in the following key management personnel: Chief Executive Officer, Chief Inspector, Chief Pilot, Director of Maintenance, Director of Operations, General Manager, Principal Avionics Inspector, Principal Maintenance Inspector, and Principal Operations Inspector. This indicator is designed to measure the stability of air carrier management due to changes in designated personnel for both small and large air carriers. VIS data is used to track changes in these nine personnel categories for each air carrier. The SPAS Economic Indicator(s) provides a measure of the current economic state of the air carrier based on the credit information compiled through TRW's Business Credit Services. This indicator is designed to forecast the likelihood that an operator's business will enter a period of increased economic and financial risk within the next six months. SPAS Indicator data is available in different formats. It can be used to drill down to a detailed level, is available for five previous years, and can be used to compare the air carrier to its own records or to the average performance of the entire industry segment in which it is categorized. Analysis of this data can provide insight into the air carrier's current safety and economic profile, as well as to detect developing trends; analysis over a period of time may also provide an indicator of the root causes of these trends. The results of this type of analysis can be used to target surveillance and to reduce the potential for failure in air carrier systems, sub-systems, and/or elements. In rating the air carrier elements based on SPAS Indicator(s) data, consider the following:

- A large percentage of change, whether favorable or unfavorable, over a period may indicate management, economic, and/or operational changes that could affect the stability of the air carrier's systems and safety profile. Where necessary, drill down to specific events and review the underlying data.
- Determine the potential impact of SPAS Indicators on the air carrier's system and operational stability with consideration to the size of the air carrier. The impact of SPAS Indicators on small air carriers may be greater than on large air carriers, all other things being equal. Key management personnel at a small air carrier may play multiple roles. The loss of this type of management capability could be significant. Economic and/or financial changes such as changes in their external credit rating due to flux in the marketplace, loss of passenger volume and related revenues could be significant to a small air carrier. In both instances a large air carrier may have additional resources that can be relied upon.
- Determine the potential impact of SPAS Indicators on new air carriers versus experienced air carriers. The impact of SPAS Indicators on new air carriers may be greater than on experienced air carriers, all other things being equal. Key management personnel are considered critical to ensuring the success of the new entrant's initial operating plan. The Office of the Secretary of Transportation issues its economic authority with consideration given to the strength of the new entrant air carrier's management team. High management turnover could be significant to a new entrant, whereas an established air carrier may have additional levels of key management and be better prepared to sustain the loss. Regardless of number of years an air carrier has been in operations, the changes reflected in the SPAS Indicators should be considered in light of their potential impact on system and operational stability.

- Consider the impact management, personnel, economic, or operating changes may have on the related SPAS Indicators. Consider the impact that changes in the industry could have on the air carrier systems and operations, particularly in the period immediately following the change.

Change in Air Carrier Management

Changes in areas other than key management personnel can also have a significant impact—positive or negative—on an air carrier's system and operational stability. This indicator is intended to focus on changes in air carrier management not captured through the SPAS Management/Economic Indicator, such as changes in air carrier middle management personnel responsible for managing critical departments of the organization. Consultation with the air carrier or use of industry data may be helpful in identifying such changes and assessing the impact of their departure. In rating the air carrier surveillance elements based on changes in air carrier management data, consider the following:

- A change in air carrier middle management may also have a greater impact on small air carriers than large air carriers, all other things being equal. Middle management at a small air carrier may be primarily responsible for the quality of the air carrier's systems, and any major changes could be significant. A large air carrier may have additional resources that can be relied upon when air carrier middle management personnel change. Regardless of size, the significance of the change in air carrier management should be assessed to determine the potential impact on the air carrier's system and operational stability.
- The air carrier management may include personnel in the air carrier's safety and/or quality assurance, engineering, operations, and maintenance departments. Changes in middle management in any of the air carrier's major lines of business should be considered; changes in administrative management should also be considered though they may not have the same level of impact.
- In general, internal selections of new management personnel are less disruptive than external hires. However, if the air carrier has a history of safety problems, external knowledge and experience may provide the organization with an opportunity to build a stronger safety system. Similarly, civil experience may be preferable to a military aviation background in new management personnel since knowledge of the Federal Aviation Regulations and experience interfacing with the FAA are beneficial.
- If the reason behind the change(s) is performance based, the change may be an improvement. On the other hand, downsizing, streamlining, and reorganizations can reduce the amount of safety oversight within the air carrier. New programs may alter existing lines of authority and supervision. Ownership changes may result in replacement of key departmental managers.
- Consider the affect on overall air carrier philosophy or operational priorities. Cost-cutting and greater "bottom line" pressure can undermine or dilute an air carrier's quality orientation and may lead to reduced emphasis on safety. Each change should be considered in light of the systems that it could affect.

Turnover in Personnel

A loss of personnel can dramatically increase the potential for failure in one of the air carrier's systems, sub-systems, or elements. The loss may be contained in and affect only the maintenance or operations organizations, or there may be a significant loss of key personnel throughout the entire organization. Maintenance personnel include staff members directly involved in ensuring the quality of the maintenance organization. Operations personnel include staff members directly involved in ensuring the quality of air carrier operations, including flight crewmembers, flight attendants, dispatch, and training staff. Consultation with the air carrier may be helpful in identifying these people and assessing the effect of their departure. Consider these issues when assessing this indicator:

- Turnover in air carrier personnel may have a greater impact on small air carriers than large air carriers, all things being equal. A loss of personnel responsible for ensuring the day-to-day operations or maintenance quality of the air carrier's systems at a small air carrier could be significant. A large air carrier may have additional resources that can be relied upon when air carrier personnel change. Regardless of size, the significance of the change in air carrier personnel should be assessed to determine the potential impact on the air carrier's system and operational stability.
- A high turnover in personnel, across the air carrier, or within the maintenance or operations organizations, should always raise a concern. Consider the impact—positive or negative—that loss of personnel due to downsizing, streamlining, attrition, the end of a program, and/or reorganizing, has on quality and safety.
- Depending on circumstances, internal selections of new personnel are less problematic than external hires. If, however, the air carrier has a history of safety problems, external knowledge and experience may provide the organization with an opportunity to build a stronger safety system. Similarly, civil experience may be preferable to a military aviation background in new management personnel since knowledge of the Federal Aviation Regulations and experience interfacing with the FAA are beneficial.
- Consider whether or not new or remaining staff are being retrained or cross-trained to perform the new or expanded maintenance or operations functions. The impact that the turnover in personnel has on critical systems should also be considered.
- If the reason behind the turnover is an expected, controlled change, it may not be a concern. On the other hand, if the turnover is sudden and due to employee dissatisfaction, it could indicate future problems.
- Consider the impact of personnel turnover on the air carrier's control systems. Well-established and maintained control systems with fully documented procedures may allow the air carrier to absorb turnover in personnel without affecting quality or safety.

Reduction in Workforce/Layoffs/Buy-outs

Workforce reductions, layoffs, or buy-outs may or may not have an impact on safety and the potential for non-compliance; it depends on how and why they occur, and who is involved. Consider the following in assessing this indicator:

- Workforce reductions, particularly when large numbers of air carrier personnel are affected, may be managed and/or absorbed more easily by large air carriers than by small air carriers. Regardless of size, the significance of the workforce reduction, layoff, or buy-outs should be assessed to determine the impact that these events could have on the air carrier's system and operational stability.
- The pace or rate of any reduction is important. If it is gradual, steady, and implemented over a reasonable period of time, there may be no cause for concern. On the other hand, if it is abrupt, haphazard, uncoordinated, or occurs over a short time frame, it may be an indication of instability.
- In general, layoffs of administrative and support staff may cause less concern than the loss of key management or technical personnel. Loss of the most experienced personnel, as often occurs in air carrier buy-outs, or of quality, safety, or training personnel should always raise a concern.
- Consider the reason(s) for the reduction. If the reduction is due to the end of a major program or part of a normal industry cycle, it may not be problematic. Downsizing, streamlining, and reorganizations, by contrast, may be of concern depending on how they are handled. Any de-emphasis on safety and quality should be viewed with caution.
- Consider the strength of the affected program or department's control system. If they include well-established processes and controls, the air carrier may be able to absorb a workforce reduction or layoff without affecting quality or safety.
- Further consider the issue of training as it relates to workforce reductions or layoffs. Whether or not new or remaining staff are being retrained or cross-trained to perform the new functions is a factor. The basic qualifications of staff performing critical functions or roles, as well as the adequacy and effectiveness of any training provided to personnel assuming new or expanded duties, should be factored into your determination. The impact that the losses and time factor required for training or retraining has on the air carrier's systems should also be considered.

Rapid Expansion/Growth

Air carrier expansion or growth can also raise potential safety and quality concerns, and influence the likelihood of non-compliance with existing processes and controls. Rapid expansion or growth could affect the air carrier's resources and the operations, maintenance, and training programs required to run the business. Similarly, as an air carrier grows, it may not add the necessary personnel, internal control mechanisms, or financial resources necessary to sustain its infrastructure or an expanded scope of operations. Again, the "how" and "why" of these events should be considered when evaluating this indicator:

- The speed, depth, and breadth of growth are critical. If growth is controlled and steady, as opposed to rapid "overnight" expansion, there is generally less potential for problems. If the growth involves opening a new facility or facilities, or results in new or additional geographic dispersion of the workforce, safety and quality issues should be considered.
- The nature of any growth also needs to be considered. If the company is expanding into new business areas, expanding its technological base, or bringing on new types of aircraft or programs, this may be cause for concern. Likewise, if they are acquiring new and/or additional approvals, heightened concern may be warranted.
- Do not overlook proxy growth, or internal growth—things that may not be immediately obvious. Proxy growth occurs when new or different personnel are used in the place of existing personnel or when operational authority is delegated due to absence. Greater use of outsourcing, subcontracting, or suppliers can expand a company's business without changing its staff or facility size. Internal shifts in personnel or business emphasis can also significantly affect the safety picture. Generating more output with the same or fewer resources, through process improvement or productivity enhancements, can also create de-facto growth.
- The extent to which staff size and capability have kept pace with any growth is also important. Providing appropriate training to staff in new program areas is a sign of well-managed growth. The absence of such actions should probably raise a concern. The impact of rapid expansion or growth on critical air carrier systems should also be considered.
- Consider the impact of growth on the air carrier's control systems. If they include well-established processes and controls, the air carrier may be able to absorb the growth in business areas, technology, aircraft types, or programs without affecting safety. If growth changes or reduces the efficiency or effectiveness of the control systems, further assessment is warranted.

Merger or Takeover

Mergers and takeovers have become increasingly common in the aviation industry. Who is buying and what they do to or with the acquired air carriers and their systems, sub-systems, and elements should drive your assessment rating. With a merger or takeover, the air carrier's management structure, personnel, contractors, and facilities may change. All of these factors could have an impact on the operational stability of the air carrier. Consider these issues if a merger or a takeover has occurred:

- Consider whether or not the buyer has an aviation background. If not, initially this may cause problems. If they do, prior experience interfacing with the FAA and knowledge of the Federal Aviation Regulations is an additional plus, since they will know the regulations and also have a safety/compliance track record that can be checked.
- Also consider the impact of the merger or takeover on the organization's system controls. If the air carriers are substantially different, integrating their system controls may be challenging and problematic. If the merger or takeover changes or reduces the efficiency or effectiveness of the system controls, further surveillance is warranted.
- Retaining key personnel, or replacing them with qualified staff, is also an important consideration in the event of a merger or takeover. Consider the background of new staff if key personnel are laid off or replaced. A solid aviation background may compensate for the loss of personnel with air carrier-specific experience. New staff with previous civil aviation experience and Federal Aviation Regulations and FAA familiarity may ease the transition and have less of an impact on quality and safety.
- Some merger or takeover transactions have no real impact on safety or quality. The outcome may simply be a name change, or it may occur at a very high level. In these cases the impact on system or operational stability may be minimal.

Labor-Management Relations

Smooth and consistent labor-management relations are critical to the system and operational stability of the air carrier. Disagreements between labor and management can disrupt air carrier operations and have a tremendous impact on the quality and safety of an air carrier. A threatened or actual shutdown in operations can have a disastrous economic impact on an air carrier. This, in turn, can affect the stability of an air carrier's systems. On the other hand, a good working relationship between air carrier labor and management can positively affect air carrier operations and safety. Consider the following when rating the relationship between air carrier labor and management:

- Consider the status of the bargaining agreement between air carrier labor and management. If an agreement is in place, operational, and not in the process of being re-negotiated, the relationship may be secure and stable. If the air carrier is amidst labor negotiations or scheduled to re-negotiate in the near future, the relationship, though stable, may be changing. Look for signs that indicate a lack of trust between parties. This could be an indicator of future problems. If negotiations are underway, going smoothly, and trust exists between labor and management, there may be no cause for alarm.
- An air carrier that operates as an owner/operator business may have no bargaining agreement. Look for dissatisfaction among groups within the owner/operator base to indicate instability. Long hours and low pay, even as an owner/operator, can present problems and have an impact on an air carrier's system and operational stability.
- Consider the impact that adverse labor-management negotiations can have on the air carrier's control systems. If the air carrier does not recognize a threat to their control systems, and the labor negotiations are lengthy, problems could result. If the air carrier recognizes the threat to their control function and takes steps to ensure operational effectiveness, there may be little or less of a problem.
- Ascertain whether the air carrier's current labor-management relationship has an operational impact on safety or quality. If there is no real impact at the operational level, air carrier systems may not be affected. If there is an impact at the operational level, air carrier systems could be affected and problems could follow.

SYSTEM STABILITY/AIR CARRIER DYNAMICS INDICATORS

Inspection Department/System (Airworthiness Only)

The effectiveness and stability of an air carrier's Inspection Department and related processes and system controls is critical to their safety profile. Quality control, or the air carrier's capability to effectively manage and audit both the day-to-day and strategic aspects of its Inspection Department and related systems, is a critical indication of its capability to identify potential safety issues and trends before accidents, incidents, and non-compliance occur. An effective Inspection Department includes defined lines of authority, a structured process for delegation of authority, clear distinction and separation between the production (maintenance) and inspection functions, and an effective quality control or assurance function that is designed to identify and resolve issues before they become safety problems. Consider the following in rating this indicator:

- Consider the reason behind any changes in the Inspection Department. A performance-based change may be an improvement. On the other hand, changes that do not address Performance could affect the amount of safety oversight within the department. Changes in authority, supervision, and/or Inspection Department management may be cause for concern.
- Determine if there were any changes in Required Inspection Item (RII) personnel or the RII program. If so, consider the impact of the changes on the air carrier's Inspection Department and quality control system.
- Determine the strength of the department's control system(s). The quality of the control system and its capability to consistently anticipate and indicate deficiencies is critical to air carrier self-identification of potential problems. A clear separation between the production and inspection functions is also a positive indication of the air carrier's quality control system. If the lines of distinction are not clear between these two functions, there may be cause for concern.
- Consider whether the department is structured and has systems designed to integrate enhancements and improvements. Proactive changes made to correct deficiencies before they become problems is an indication of the quality of the Inspection Department. Documentation and dissemination of potential safety issues and problems both within the Inspection Department and throughout the organization is another indication of the effectiveness of the air carrier's control system(s). Be concerned if the air carrier's Inspection Department and related systems are not designed to anticipate, identify, resolve, and document potential safety issues and trends.
- Consider the rate of change within the Inspection Department. If the change is gradual, steady, and implemented over time, then there may be no cause for concern. On the other hand, if the change is abrupt, haphazard, and/or occurs over a short timeframe, it may be an indication of instability.
- Consider the degree to which there is delegation of duties and authority within the Inspection Department. If the air carrier does not normally have a high level of delegated duties, growth in this area could be an indication of management instability or fluctuation in or lack of staff. Excessive delegation of operating authority within the Inspection Department could also be problematic, particularly if done routinely and without clear communication and full documentation.

New/Major Changes to Program

A major change in a program, or the introduction of a new program to the air carrier, can create quality or safety issues and may increase the potential for non-compliance with existing processes and controls. If the new program or program change affects the air carrier's operating plan, it could have a significant impact on the air carrier's operations, maintenance, and training systems. Consider the following in rating this indicator:

- All new or major changes to programs should be well described and fully documented. Program documentation that does not exist or does not adequately describe the new or changed environment should raise a flag. New programs or program changes that are well documented should be no cause for concern.

- Consider the impact of new or major program changes on personnel. Does the air carrier's staff size and capabilities meet the requirements of these programs? Consider whether air carrier personnel are trained in and have a clear understanding of the new program or program changes.

- Consider the reason behind any program improvements or enhancements. Program improvements or enhancements are often positive, provided they are not motivated primarily by cost cutting and Federal Aviation Regulation compliance is maintained. Changes based on FAA recommendations and findings are to be encouraged and can generally be viewed as a positive indication of the air carrier's commitment to managed change and system stability.

- Consider the strength of the department's system control(s). Well-established and maintained system controls, with fully documented procedures, may allow the air carrier to absorb new programs or program changes without affecting quality or safety. If the programs reduce the efficiency or effectiveness of the system controls, further surveillance may be warranted.

CAS System (Airworthiness Only)

The quality and effectiveness of an air carrier's continuous analysis and surveillance (CAS) system can also have a significant impact—positive or negative—on their safety profile. A CAS system is intended to provide the air carrier with an internal diagnostic and evaluation tool (audit and surveillance) for continuously monitoring and correcting deficiencies in its maintenance program through a system of ongoing data collection, data analysis, and trend reporting. As air carriers are primarily responsible for the safety and stability of this program, an effective CAS system is a powerful management tool. When implemented and maintained within an environment that includes clear definition of responsibilities, process independence, management commitment, continuity, scheduled evaluation, corrective action and follow-up, and clear, concise, and available documentation, a CAS system can provide the air carrier with one critical means of ensuring management control over the maintenance organization. Consider the following when rating this indicator:

- Determine if the CAS system is independent. To ensure that the methods of the maintenance organization conform to its requirements, the CAS system should be designed to function as an independent management tool.
- Determine if the CAS system includes an aircraft/component performance monitoring function. Consider whether that function involves collecting, compiling, and analyzing data; comparing collected data to established standards; identifying deficiencies; and taking corrective action. It could be problematic if the CAS system does not provide the air carrier with the data necessary to effectively monitor routine day-to-day activity, respond to emergency situations, and monitor long-term trends. By design, a CAS system should provide the air carrier with the data necessary to determine the cause of a problem so that corrective action can be taken to prevent similar situations from recurring.
- Consider the CAS system personnel requirements. The CAS system supporting environment should include personnel who have responsibility for evaluating the results of the CAS, defining and developing corrective action plans, and reporting CAS and corrective action results. The air carrier is ultimately responsible for the deficiencies identified through their CAS system and must have properly trained personnel to accept this responsibility and be accountable for the aircraft/component performance monitoring, internal audit and surveillance functions. Consider the air carrier's training programs in this area and the performance history of the responsible personnel.
- The CAS system should be supported by written procedures for data collection and analysis. These would include development of trend information, performance standards, reporting standards, and corrective action and follow-up standards. The effectiveness of these procedures in supporting CAS functionality should be ascertained. If these written procedures are not clearly defined and readily accessible to the personnel responsible for internal audit and surveillance, a flag should be raised.
- Determine if an internal audit and surveillance function exists to support the CAS system. The function should have the authority to follow-up on corrective action measures. If the authority to follow-up on corrective action is readily apparent and well defined, the potential for problems in this area is generally lessened. Regardless of where they are located within the organization or how the air carrier has elected to implement the requirement, the personnel responsible for internal audit and review of the CAS system results should be clearly identified and defined so that they are independent of the maintenance organization. Be concerned if the internal audit and surveillance function is not separate from the maintenance organization and does not cover all aspects of the air carrier's approved program.

CAS System (Airworthiness Only) (Continued)

- Determine if there is a well-designed and effective means of communicating the results of the CAS system and any related corrective actions. The CAS system should have clear and functioning channels for the flow of analysis and surveillance information. Find out if the information channels include contractors/vendors as well as the air carrier personnel. The air carrier should have a defined means for disseminating aircraft/component performance and corrective action information properly. Determine if this mechanism includes a feedback loop designed to ensure that any changes implemented as a result of the corrective action are functioning as intended and improving the process. The information to be disseminated and any actions that occur as a result of sharing this information should be documented.
- Consider changes to the CAS system in terms of the impact they may have on the performance and effectiveness of the Inspection Department and the air carrier's program covering maintenance, preventative maintenance, and alterations. In addition, consider how the change might affect the air carrier's capability to identify, isolate, and correct deficiencies in the program regardless of whether the programs are carried out by the certificate holder or by another entity. It could be problematic if the air carrier's capability to correct deficiencies is affected by the change to the CAS.

Safety Program

An internal safety program is one of the most powerful tools that air carrier management can employ to measure and ensure flight safety. An effective safety program can also be a measure of an air carrier's system and operational stability. Consider the following in rating this indicator:

- Determine whether the air carrier has a formal safety program. Consider whether the air carrier has a written statement of corporate safety policies and objectives. Consider whether the air carrier has a flight safety department or a designated flight safety officer. If the air carrier has a flight safety department or officer, determine how well the policies and procedures are implemented and the effectiveness of the process. While having a designated flight safety department or officer is a positive indication, the overall effectiveness of the air carrier's safety program is most critical.
- Consider the importance of the safety program within the air carrier. Visible senior management support for these policies and objectives is a positive indication of the air carrier's position on safety. If the air carrier's management philosophy places a strong emphasis on safety, it will generally be visible throughout the rest of the organization. If the safety department or safety officer reports directly to senior air carrier management or the board of directors, this may also be an indication of the importance the air carrier places on safety.
- Consider if there is a well-designed and effective means of communicating safety information to employees. The air carrier should have an effective means for disseminating safety policies and objectives throughout the organization. Determine whether:
  - the air carrier conducts periodic company-wide safety meetings;
  - the air carrier supports periodic publication of a safety report or newsletter;
  - the air carrier distributes safety reports or newsletters from other external sources.
- Consider whether the air carrier participates actively in industry safety activities. Such activities include those sponsored by the Flight Safety Foundation (FSF), International Air Transport Association (IATA), and others. Also consider whether the air carrier has or will share their safety-related data with other air carriers.

Internal Evaluation Program

The internal evaluation program should provide a measurement of the air carrier's internal processes and procedures to assess whether they are adequate and functioning properly. Consider the following in rating this indicator:

- Determine whether the air carrier's internal evaluation program is independent of the development of procedures and the management of work. Assess whether the air carrier's program defines the responsibilities for performing evaluations, developing corrective actions and reporting results. These duties should be clearly defined so they are independent of other duties and responsibilities.
- Consider whether the air carrier's program is a structured, organized activity that includes planned and follow-up evaluations. The schedule and plan should be directed and recognized by top management. The identified deficiencies must have corrective actions implemented in a timely manner and management should hold the responsible person accountable for assuring corrective action has been taken. The evaluation program must have a process to identify what corrective action has been taken and the capability to schedule follow-up evaluations.
- Determine whether the air carrier maintains records documenting the performance and results of the internal evaluation program. The air carrier should be identifying the root causes of the conditions disclosed in findings and implementing final resolution.

Best Practices

An air carrier's safety philosophy or priorities are often reflected in the way that they view and apply the Federal Aviation Regulations within their organization. When an air carrier sets safety standards higher than what is required by regulation, it is referred to as a best practice. Assess and evaluate the following considerations with respect to this indicator:

- Best practices can be transferred from one air carrier to another; implementation of a best practice has the additional advantage of transferring the safety philosophy or emphasis from one air carrier to another. Implementation of best practices by the air carrier may indicate that less FAA surveillance is required.
- Determine if the air carrier has developed best practices within its systems, sub-systems, and elements. If so, identify and assess these best practices. Consider whether or not they provide the air carrier and the aviation industry with a validated, superior method that enhances a regulatory standard, contributes to performance improvements, and that enhances the level of operating safety. Best practices are an important measure of the air carrier's commitment to quality and safety. Where a documented best practice exists within an air carrier organization or system, surveillance may potentially be reduced.
- Determine how the best practice was implemented. Ascertain if the original intent of the best practice remains valid and the safety standard in the area addressed by the best practice remains at, or higher, than the required level. If there has been any negative change in the safety standard based on the air carrier's implementation of the best practice, further investigation may be warranted.
- Consider the air carrier's process/control for continuously improving best practices. Determine if the air carrier has a continuous improvement process and, if so, where it is located within the organization. Consider whether the improvement process is independent of the best practice itself and the related air carrier system. Consider whether management is committed to this type of best practice process improvement and to implementing changes to the best practice.

Resource Management Training

Under Advisory Circular 120-51B, per the regulation Part 121 certificate holders will have provided crew resource management (CRM) training for flight crewmembers by March 19, 1998; CRM Training for flight attendants and dispatch resource management (DRM) training for aircraft dispatchers must be provided by March 19, 1999. Implementing or having access to an effective resource management training program for flight crewmembers, flight attendants, dispatchers, and other employees is a positive indication of the air carrier's operational stability and commitment to safety. Management of these key resources can be enhanced through an effective resource management training program. Implementation of this type of training for other employees, such as maintenance and station operations personnel, where it is not required by regulation, is a further indication of the air carrier's commitment to quality and safety. A highly effective, validated resource management training program for all air carrier personnel could constitute a best practice. Consider the following when rating the effectiveness of the air carrier's resource management training program:

- Determine how the air carrier has implemented the CRM and DRM training requirements. If the air carrier has decided not to provide internal CRM and DRM training, determine if they have made the necessary arrangements to train their flight crewmembers, flight attendants, and dispatchers through another certificate holder. Consider the structure of the CRM and DRM training programs, and whether they include both initial and recurrent training.
- Determine the effectiveness of the resource management training program. Determine whether it meets or exceeds what is required by regulation. Consider any collected performance data available for FAA review that could be used to assess the program effectiveness. An effective resource management training program, whether provided by the certificate holder or through another certificate holder, is a positive indication of the air carrier's commitment to their employees and their emphasis on safety and system stability. Effective CRM and DRM training programs might not warrant high levels of surveillance.
- Consider whether the air carrier has implemented CRM and DRM within areas of the organization where it is not required by regulation. If so, determine if it has been proven effective. Consider whether both initial and recurrent training are included.
- Consider the effectiveness of training aids, devices, methods, and procedures incorporated in the CRM and DRM training programs. Consider whether the air carrier responds, in a timely and cost effective manner, to FAA requests for CRM and DRM curriculum adjustments and modifications. Consider the quality of the adjustments and modifications made by the air carrier.
- Consider the air carrier's position on correcting deficiencies identified through the CRM and DRM programs. If the air carrier immediately implements controls to correct the deficiencies in a manner acceptable to the FAA, further surveillance at this time may not be warranted. If, however, the air carrier does not have a strong corrective action plan and process, additional surveillance may be necessary.

Risk Management

Risk management is an iterative management activity dedicated to assuring that risk is identified, eliminated, or controlled within defined program risk parameters. Safety risk is an expression of the probability and impact of an undesired event in terms of hazard severity and likelihood. Within an air carrier, a safety risk can apply to systems, sub-systems, and elements, as well as operational and maintenance procedures. Safety risks can be triggered by both internal and external events. To ensure the operational stability of their organization, air carriers may employ a risk management methodology to proactively plan for, identify, analyze, assess, and manage risks. A proactive, well-documented process that allows the air carrier to effectively respond to risks can have a positive impact on quality and safety. The lack of a risk management process can place the air carrier in the position of reacting to risks rather than managing them. A quick and determined response to a risk is a positive indication of the air carrier's system stability and emphasis on safety. Consider the following when rating the air carrier's risk management methodology:

- Consider the air carrier's overall risk philosophy. Consider whether the air carrier's approach to risk management is proactive or reactive. Observe how the organization reacts to a risk or a change that could incur risk. If the air carrier places a strong emphasis on safety, cooperation, and corrective action, it will generally have a more visible, proactive response to risk.
- Determine whether the air carrier has a formal risk management process. Consider whether the air carrier has documented planning, hazard identification, hazard analysis, hazard assessment, and risk management steps. Determine whether the air carrier's process allows them to quickly plan for, identify, and manage potential hazards, and make competent risk management decisions. An effective, well-documented, and proactive process is a positive indication of the air carrier's approach to risk management and safety.
- Determine whether the air carrier has been successful in controlling risks within the organization and implementing corrective action using their risk management process. Consider whether the process provides the means to accept, transfer, avoid, and mitigate the risk.
- Consider if the air carrier has a well designed and effective means of communicating risk management-related information and the results of risk management activities throughout the organization. A strong response on the part of management, a willingness to communicate openly with all affected parties, and the capability to establish and maintain a good working relationship between air carrier personnel and the FAA can have a positive impact on quality and safety.
- Consider the air carrier's decision making process. Determine whether the air carrier has an internal planning process to gather the information necessary for competent risk management decision making. Consider whether the air carrier uses simple experiential decision making or more sophisticated techniques such as simulation, reliability analysis, fault or hazard tree analysis, or other tools. Determine if the selected technique provides the air carrier with the information necessary to make reliable risk decisions.
- Consider the air carrier's hazard identification process. Determine whether the air carrier has an analytic process to identify and validate hazards. If so, do they also have the capability to properly evaluate the significance and probability of the hazards, including a review and assessment of their systems and system interfaces? Complex systems may require modeling tools, simulations, and other methods of analysis to establish critical paths and interfaces. Consider how the air carrier determines if identified hazards are under acceptable control or if corrective action is required.

Risk Management (Continued)

- Consider the impact of organizational change on the air carrier's risk management philosophy. Ascertain whether the air carrier is currently managing or anticipating additional risk to their operation. Determine if the current or anticipated risk could have an operational impact on safety or quality. Determine the effectiveness of the risk management process during change. Consider the impact of personnel changes. Determine the impact of cost cutting and greater "bottom line" pressure.
- Determine the impact of risk on the air carrier's system controls. If segments of the air carrier's operation and the related system controls are affected by a risk, consider how the system controls respond to the risk. Also consider how the air carrier responds to any impact that the risk has on the system controls.

Cooperative Relationship with Assigned FAA Personnel

A cooperative relationship between air carrier and assigned FAA personnel may be a positive indication of the operational stability of the air carrier. Strong communication, a high level of trust, and a good working relationship between key air carrier personnel and the FAA personnel assigned to monitor the air carrier can also have a positive impact on quality and safety. A weak communications infrastructure and a lack of trust between parties can have a negative impact on air carrier operations, quality, and safety. This, in turn, can affect the stability of the air carrier's systems. Consider the following when rating the relationship between the air carrier and assigned FAA personnel:

- Determine if there is a good working relationship between air carrier and FAA personnel. If there is a history of strong two-way communications and a good working rapport, the relationship should be stable and secure.
- Consider whether the air carrier is willing to share data and findings with the FAA. Where high quality information is readily accessible and available to the FAA, less surveillance may be warranted.
- Consider whether or not the air carrier is willing to conduct joint inspections with the FAA and welcomes FAA recommendations and suggestions.

Human Factors

Human factors are the overall set of operating, system, safety, ergonomic, and environmental considerations that the air carrier has implemented to ensure the safety, health, well-being, motivation, and continued effectiveness and performance of their employees. In a well-functioning organization, human factors are built into every aspect of the business. An organization that emphasizes human factors values its employees as a resource without which they would not be able to succeed. Given the labor-intensiveness of most air carriers, human factors could be a critical component of their safety profile and their financial success. Consider the following when rating this indicator:

- Consider whether or not the air carrier has a specific program that addresses human factors. Are human factors integrated into all aspects of the air carrier's operation? Does the air carrier have a separate department or unit within the organization dedicated to human factors? Determine how the air carrier handles human factors and the effectiveness of the human factors within their operations. Consider whether or not human factors have corporate level support within the organization. A corporate human factors policy or philosophy can go a long way toward ensuring the application of human factors throughout the organization. Determine if the air carrier's application of human factors has an impact on the safety of their systems.
- Determine how human factors are actually applied within the air carrier organization. Does the air carrier have a human factors training program, or does the air carrier integrate human factors into all aspects of its training program? Does the air carrier try to help their employees succeed in applying safety through human factors? In other words, does the air carrier look at the reasons for errors and safety problems and try to educate their employees on how to correct problems and errors rather than firing or transferring employees? Do they have a process to ascertain the root cause of human factors problems?
- Consider how the application of human factors within the air carrier enhances or hinders the safety of the air carrier's systems and environment. Have human factors been built into the air carrier's CAS and safety systems? If so, do the training programs that support these systems also incorporate the related human factor tools and techniques? Consistent application of human factors is critical to their success.
- Determine if the air carrier participates in the Maintenance Error Decision Aid (MEDA) program. Programs such as MEDA are designed to enhance human factors within an organization and can be used as powerful and effective education and training tools.

OPERATIONAL RISKS/PERFORMANCE HISTORY INDICATORS

Enforcement Actions

Enforcement Actions provide an indication of the air carrier's performance history. They are the reported results of any administrative and/or legal enforcement that the FAA has taken against an air carrier and/or certificated personnel to require compliance with a Federal Aviation Regulation.

To be most effective, this data must be reviewed and analyzed in conjunction with the air carrier's corrective action plan and results. Taken together, the Enforcement Investigation Reports (EIR), the FAA recommendations, and the air carrier's corrective actions can provide insight into the air carrier's response to problems identified in their environment. Analysis of this data provides one means of assessing the air carrier's safety and quality assurance profile; trends that are evident in the data may also indicate changes in management or operational philosophy. FAA enforcement actions, the air carrier's response to these actions, and trends in enforcement actions can have a significant impact on an air carrier's safety profile and potential for failure in an air carrier's systems, sub-systems, and elements. Consider the following when rating this indicator:

- Consider the number, type, and criticality of the EIR. Enforcement actions can provide an indication of the stability of the air carrier and their systems. Consider if the EIR is repeated in the same or an interfacing area. Multiple EIR, whether they address similar or dissimilar alleged violations, could be an indication of management, economic, and/or operational changes that could affect the air carrier's systems and safety profile. Compare the EIR to other air carrier activity reports (e.g., accidents, incidents, occurrences, complaints, Freedom of Information Act (FOIA), and Congressional Inquiries). Consider the accident, incident, and occurrence data and its relationship to the EIR data.
- Consider the root cause of the EIR. Knowing why the air carrier is having problems in one area could provide an indication of problems that exist or are developing in another area. Consider what the EIR means from a systems perspective. Consider whether or not the alleged violation has an impact on the air carrier's major systems. Each EIR should be considered in light of all the systems that it could affect.
- Consider the air carrier's EIR performance history. Consider whether the air carrier has initiated corrective action and follow-up processes and procedures necessary to address the EIR in a manner that has a positive impact on operations, quality, and safety. A strong and determined response to an enforcement action is a positive indication of the air carrier's commitment to the regulations and to safety.
- Determine the strength of the applicable department's system controls. Consider whether or not the system controls are affected by the EIR, the FAA's recommendation, and any corrective action taken by the air carrier. If there are effects, consider how the system controls respond.
- Consider whether or not the EIR might have had an impact on any aspect of the air carrier's training program. If there is any impact, determine which aspects of the training program have been affected. Further, determine the implications of the impacts in terms of additional surveillance requirements.

Accidents/Incidents/Occurrences

Accident, incident, and occurrence data may provide a measure of the air carrier's performance history. An accident is an event associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage. An incident is an event, other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations. An occurrence is any event other than normal operations that is not an accident or incident. A near midair collision is an incident associated with the operation of an aircraft in which a possibility of collision occurs as a result of proximity of less than 500 feet to another aircraft, or where a report is received from a pilot or other flight crewmember stating that a collision hazard existed between two or more aircraft.

The data associated with accidents, incidents, occurrences, and near midair collisions provide performance information related to the circumstances, the conduct of any related investigations, any safety recommendations made by FAA, and any corrective action taken by the air carrier. Collectively, this information may provide a point-in-time measure of the air carrier's performance and the FAA's recommended action in response to this performance. To be most effective, this data should be analyzed in conjunction with the air carrier's response, corrective action plan, and ongoing follow-up activities. When considered together and over a period of time, specific accident/incident/occurrence and other related data may provide insight into the air carrier's response to identified problems. Immediate response to accidents as well as performance history in this area can have a major impact on an air carrier's safety profile and potential for failure in their systems. Consider the following when rating this indicator:

- Consider the number, type, and criticality of the accident(s), incident(s), and occurrence(s). Those that are repeated in the same or an interfacing area provide some indication of the status of the air carrier and their systems. Repeated activity could be an indication of management, economic, and/or operational problems or changes that could affect the air carrier's systems.
- Consider the root cause of the accident(s), incident(s), and occurrence(s). Knowing why they happen could provide an indication of problems that are specific to the air carrier and/or problems that are systemic and could affect other air carriers. Consider what the accident means in terms of the air carrier's systems as well as the environment in which the air carrier operates. Each accident, incident, and occurrence should be considered in light of all the systems that it could affect.
- Accident(s), incident(s), and occurrence(s) information is provided in a variety of different formats including Aircraft Accident/Incident Preliminary Notices, FAA Accident Investigation Records, Investigation of Pilot Deviation Reports, Accident/Incident Corrective Action Records, etc. The information provided on these reports provides an indication of the air carrier's performance history and should be reviewed as part of the assessment of this indicator.
- Determine the strength of the air carrier's system controls. Consider whether the system controls are affected by the accident(s), incident(s), or occurrence(s), the FAA's recommendation, and any corrective action taken by the air carrier. If so, consider how the system controls respond.

Accidents/Incidents/Occurrences (Continued)

- Consider the air carrier's accident(s), incident(s), and/or occurrence(s) performance history. A strong and determined response is a positive indication of the air carrier's commitment to the regulations and to safety. A weak, quick-fix mentality could be an indication of the air carrier's unwillingness or inability to address the problems identified as a result of an accident, incident, or occurrence. Consider whether or not the air carrier has initiated corrective action and follow-up processes and procedures necessary to address the accident(s), incident(s), and occurrence(s) in a manner that has a positive impact on operations, quality, and safety. While additional surveillance may still be required, this type of positive response indicates the air carrier's commitment to safety and quality.
- Consider whether the accident(s), incident(s), and/or occurrence(s) should have had an impact on any aspect of the air carrier's training program. If so, determine which aspects of the training program have been affected. Further, determine the implications of the impacts in terms of additional surveillance requirements.

DoD/ RASIP

The Department of Defense (DoD) Air Carrier Survey and Analysis Team is responsible, under Public Law 99-661 and other DoD directives, for monitoring the air carriers who do business with the DoD. The scope of their oversight includes major airlines, commuter airlines, air taxis, charters, and small air carriers. To meet this mission, they developed the DoD Commercial Air Carrier Quality & Safety (Q&S) Requirements to supplement their regulations and directives. Together, the regulations, directives, and Q&S requirements form the basis for the DoD surveillance auditing process. This process is documented on a structured Air Carrier Operations Survey Checklist. The results of this audit process are made available to the FAA for review. While the structure of the DoD surveillance auditing process varies from the FAA process, the results provide a unique view of the air carrier, as DoD is often an airline's largest customer and their process allows them to survey major air carriers every two years.

Consider the following when rating this indicator:

- Consider the scope and timing of previous Regional Aviation Safety Inspection Program (RASIP) inspections and DoD surveys. The results of these inspections/surveys can provide an indication of the stability of the air carrier and their systems. Determine if the most recent DoD survey was a complete (every two years) evaluation or a table top (every six months) review.
- Consider whether the results of a RASIP and/or DoD survey have affected systems, sub-systems, or elements. Determine which aspects of the systems were affected. Further determine what these impacts might mean in terms of additional surveillance requirements.
- Consider whether or not the DoD has ever had to enforce any follow-up actions as a result of the DoD survey including:
  - put the air carrier on temporary non-use status and re-certify them;
  - put the air carrier on their Close Watch Program that includes a table top review every month; or
  - remove the air carrier from their list of qualified air carriers.
- Consider whether the DoD has ever had to raise surveillance issues to one of their higher authorities - either the Commercial Airlift Review Board (CARB) or the Commercial Air Carrier Authority. If so, how has the issue been resolved? Consider what these types of DoD actions and the results might mean in terms of further FAA surveillance requirements.

Self-Disclosures

Self-disclosures are intended to provide the air carrier with a means to generate safety information that may not be captured through the traditional reporting mechanisms. The details of the program are documented in AC 120-58, "as revised." The self-disclosure process provides the air carrier and their employees with a means by which they can disclose information and identify possible violations of the Federal Aviation Regulations. Self-disclosure of this type of information may be a positive indication of the air carrier's commitment to addressing safety problems and proactively identifying potential safety hazards. It may also be a positive indication of the air carrier's emphasis on safety and willingness to better manage their safety profile. Self-disclosure of problems by the air carrier to the FAA can also heighten the trust that exists between the two entities and is a visible demonstration of cooperation. Trust and cooperation between air carrier and FAA personnel can have a positive impact on quality and safety. Consider the following when rating this indicator:

- Determine whether the air carrier has a self-disclosure process. Determine if the carrier's self-disclosure process results in timely, effective, and efficient reporting of information to the FAA. Consider how the air carrier has elected to implement the process and address the results of self-disclosed safety problems. Consider whether there are well-documented procedures for the self-disclosure process and for the continuous tracking and analysis of self-disclosed safety related issues. Determine how the self-disclosure process has been received by carrier management and personnel, and if management is encouraging the process.
- Consider if there is a well designed and effective means of communicating the self-disclosure process to employees. Determine if and how the process specifications were communicated to employees. Determine if air carrier employees know that their employer is encouraging self-disclosure of problems and violations. Assess how the air carrier communicates the results of self-disclosed problems/violations internally. Determine if the air carrier shares and exchanges information that identifies actual or potential safety problems with all affected internal parties and FAA.
- Consider the overall effectiveness of the self-disclosure process. Consider how well the internal self-disclosure review and assessment process is working and if it is providing the means necessary to increase and improve the flow of safety information to all parties. Consider if the self-disclosure process has positively affected reducing problems or violations.
- Consider air carrier response to self-disclosures. Determine if there is a history of corrective action related to self-disclosure. Determine if the carrier has used the results of the self-disclosure process to retarget surveillance. Determine whether the air carrier immediately implements acceptable controls to correct problems identified through the self-disclosure process. Consider the carrier systems that have been affected by self-disclosures. Have the systems been affected to the point where their functionality or controls have been jeopardized? Has the carrier's corrective action process allowed them to manage the impact of self-disclosures on their systems?
- Consider whether the results of the carrier's self-disclosure process should have had an impact on any aspect of their training program. If so, determine which aspects of the training program have been affected. Further determine what actions the carrier took to ensure the ongoing stability, quality, and safety of any affected aspects of their training program. Ascertain what these impacts might mean in terms of additional surveillance requirements.

Safety Hotline/Complaints

A complaint is an expression or a formal charge of dissatisfaction made by any entity against the air carrier. Because of their position within the air transportation industry, both air carriers and FAA receive a variety of complaints. The complaints that affect surveillance planning are those received by FAA from consumers, vendors/suppliers, other air carriers, employees, and members of Congress or their constituents that may be related to air carrier or aircraft operations, maintenance, quality, stability, compliance, or safety. Requests for information that fall under the Freedom of Information Act (FOIA) that relate to an air carrier complaint should also be factored into this indicator of the carrier's performance history. Complaint information and history as well as any actions taken as a result of a complaint provide an external view of how the carrier is perceived by consumers and within the industry. Problems identified through a simple complaint or series of complaints could indicate that the carrier is having trouble managing one or more systems. Consider the following when rating this indicator:

- Determine whether the air carrier has a process to address and manage complaints. Consider whether there are well-documented procedures for the complaint process and for the continuous tracking and analysis of complaint-related issues. Consider how the carrier assesses, analyzes, and categorizes complaints. Determine if certain types of complaints are given more credence or weight than other types of complaints. Determine how the complaint resolution process interfaces with the carrier self-disclosure process.
- Consider if there is a well designed and effective means of communicating the complaint process to employees. Assess how the carrier communicates the results of the complaint resolution process internally. Determine if the air carrier shares and exchanges information that identifies actual or potential safety problems with all affected internal parties and FAA.
- Consider the overall effectiveness of the complaint process. Consider how well the internal complaint review and assessment process is working and if it is providing a means to improve operations and safety. Determine if the process has positively affected reducing problems or violations. Consider the impact of the complaint resolution process on the carrier. Consider whether the carrier's systems have been affected by complaints. Further consider whether the carrier recognizes the impact on their systems and takes action to correct the problems.
- Consider air carrier response to complaints. Determine whether the air carrier's corrective action process has allowed them to effectively manage the impact of complaints on their systems. Consider how the air carrier involves employees, management, and FAA in the complaint resolution process. Also consider the carrier's position on complaints in the context of further surveillance requirements.
- Determine if the air carrier has used the results of the complaint resolution process to enhance safety. If the air carrier does not have a strong corrective action plan and process, or no history of corrective action related to complaint resolution, additional surveillance may be warranted.
- Further determine whether the complaint should have affected any aspect of the carrier's training program. If so, determine which aspects of the training program have been affected. Consider what these impacts might mean in terms of additional surveillance requirements.

New Entrant Carrier

A new entrant carrier is an air carrier that has conducted operations under part 121 for less than five years. At the point of initial certification, FAA requires an applicant to demonstrate that it has the resources and required operations, maintenance, and training programs to run the air carrier. FAA issues its certificate based on this demonstration of air carrier management and operational capability. Similarly, the Office of the Secretary of Transportation (OST) issues its economic authority based on the management structure and financial resources in place to support the applicant's initial operating plan.

From the time of initial certification through the first five years of operation, the air carrier's continuing fitness is reaffirmed through the surveillance process. Surveillance of new entrant carriers is often difficult because of the lack of history and data associated with the air carrier. Newly certificated air carriers may require additional surveillance to determine that they have the resources and infrastructure necessary to support stable, safe operations and growth.

The new surveillance planning and targeting process and the CSP provides for an environment where the surveillance of new entrant air carrier systems cannot be reduced from the baseline levels. Surveillance of new entrant air carrier systems can, however, be increased as a result of this assessment. If heightened surveillance is warranted, the plan will focus on assessing and verifying the air carrier's systems, sub-systems, elements, operations and maintenance procedures to ensure they are being followed. This will provide the Principal Inspector (PI) with surveillance data from which to make certificate management decisions. Consider the following when rating this indicator:

- Determine if any risks for the new entrant air carrier have been identified. Consider any risks identified as a result of surveillance results or periodic safety and financial fitness reviews. Consider any risks identified in the air carrier's outsourcing, fleet mix, growth rate, or other high-risk programs or triggers. Determine if the risks warrant targeted surveillance in specific areas.
- Consider whether or not the air carrier has provided the FAA with a revised business plan. This should include a projection of its expected growth and/or an explanation of how it will manage expected growth with respect to safety. Was the air carrier able to effectively manage and support growth or change in its systems? Determine what the results of any growth or change might mean in terms of additional surveillance.
- Determine if an air carrier has a growth model available for surveillance planning purposes. This model should depict what the air carrier needs from a safety perspective to operate its current fleet of aircraft and what is required for a larger operation as the air carrier grows. If so, run the model based on any changes in the air carrier's configuration and/or environment. Consider the results in terms of the air carrier's systems, sub-systems, and elements. Interpret the results of the modeling exercise in terms of planning surveillance requirements.
- Consider if any operational limitations have been imposed on the new entrant air carrier's Operations Specifications. Limitations may be on the size and/or number of aircraft types, makes, or models, and/or the scope of its operations. Consider why these limitations were imposed and what the air carrier has done to prove its capability to manage current operations without compromising safety. Determine how the air carrier is performing at its current level of operations and what the results of this analysis mean in terms of surveillance requirements.

SPAS Trend Indicators

SPAS Trend Indicators provide an indication of the performance history of the air carrier over time. They include all of the SPAS performance measures except those related to changes in key personnel and carrier credit ratings. SPAS trend information is available in different formats, can be used to drill down to a detailed level, is available for five previous years, and can be used to compare the carrier to its own records or to the average performance of the entire industry segment in which it is categorized. PTRS data is used to compile and track the changes in these categories.

Individual, comparative, and subject analyses can be completed with this set of measures. Individual analyses can be used to detect developing trends by comparing current to past carrier performance. Comparative analyses can be completed to determine national trends and to compare the performance of the carrier to other carriers in their peer group. Subject analyses can be completed to identify specific problems that an air carrier may be having in a specific subject area. These analyses can provide an indication of changes in air carrier maintenance and operations. These types of changes can have a significant impact—positive or negative—on an air carrier's systems, sub-systems, and elements. The Principal Inspector must determine the appropriate type and level of SPAS trend analysis based on the subject area, data availability, complexity of the certificate, and past surveillance results. Consider the following when rating this indicator:

- Major changes, whether favorable or unfavorable, in the SPAS Trend Indicators can provide an indication of the stability of the air carrier and their systems. A large percentage of change over a twelve-month period could be an indication of operational changes that could affect the air carrier's safety profile. Look for trends in performance based on past history and group performance. Consider how the trend may affect the carrier's systems, sub-systems, and elements. Where necessary, drill down to specific events to review the underlying data.
- The reason behind any change(s) in trends is also important. A favorable change could indicate that the air carrier is taking steps to improve performance based on prior surveillance results. An unfavorable change could indicate that a problem exists or is developing. Each change should be considered in light of the systems that it could affect.
- The rate of change in the SPAS Trend Indicators is also important. If the change is gradual, steady, and evidenced over a reasonable period of time, then there may be no cause for concern. However, a change that is abrupt, haphazard, uncoordinated, and/or occurs over a short time frame may be a sign of potential trouble. Look for explanations as to why the trend and any changes occurred. Consider the corrective action that was taken.
- Try to place the trend in context with other air carrier activities. The present configuration of SPAS does not generate alerts based on air carrier outsourcing or growth rates. Consider the trend in light of any changes in the carrier's economic position or operating rules. Has the carrier experienced rapid growth or expansion? Has the carrier contracted to outsource its maintenance or training programs? Determine if these types of external changes could have an impact on the trend data available through SPAS.
- Determine if any relationships exist between the various SPAS performance measures. Consider any trends that become apparent based on these relationships. Identify potential adjustments to surveillance requirements.
- Consider whether the SPAS Trend Indicators might have had an impact on any aspect of the carrier's training program. If so, determine which aspects of the training program might have been affected. Further, determine what these impacts might mean in terms of additional surveillance requirements.

OPERATIONAL RISKS/ENVIRONMENTAL CRITICALITY INDICATORS

Age of Fleet

Currently, jets in the U.S. commercial fleet average sixteen years of age. From FAA's perspective, aging aircraft are defined as aircraft of any make or model that are fifteen years or older. Much of the current U.S. commercial fleet of jets, therefore, can be considered aging aircraft. This is an important safety consideration as additional surveillance may be required. To ensure aging aircraft are safe, air carriers perform detailed inspections at set intervals. The age of the fleet also has an impact on the carrier's systems, sub-systems, and elements. As most aging aircraft contain aging systems that lack the technology and sophistication of newer aircraft, the associated training must be leveled to meet the system requirements. The age of the aircraft in the fleet is also important from a new entrant carrier perspective. The age of the new entrant's fleet must be taken into consideration for developing the surveillance plan. Consider the following when rating this indicator:

- Determine by make and model what percentage of the air carrier's fleet is aging aircraft.
- Determine whether the air carrier has a process to survey and inspect aging aircraft. Determine if the process has been able to identify and evaluate all aging aircraft in the fleet on the required intervals. Consider how the carrier documents the results of surveillance and inspection, and appropriately adjusts the required inspection intervals.
- Determine the overall effectiveness of the aging aircraft identification process. Consider whether it has allowed the air carrier to manage the operational risk associated with aging aircraft. Consider what the age of the air carrier's fleet and the internal surveillance process means in terms of surveillance requirements.
- Consider the impact of aging aircraft on the air carrier's maintenance program. Consider whether or not the air carrier recognizes the impact of an aging fleet on the maintenance program, systems, sub-systems, and elements. Is the program and the related infrastructure adequate enough to meet the enhanced requirements associated with aging aircraft?
- Determine if the air carrier immediately implements controls to correct problems with their aging aircraft or related systems, sub-systems, and elements in a manner acceptable to FAA. An air carrier having a strong corrective action plan and policy indicates their commitment to maintaining a safe fleet of aging aircraft. If the air carrier does not have a corrective action plan, controls, and processes, additional surveillance may be warranted. Determine whether or not the air carrier's corrective action process has allowed them to effectively manage the impact of aging aircraft on their maintenance program and systems. Consider what these impacts might mean in terms of additional surveillance requirements.
- Consider if there is a well-designed and effective means of communicating the maintenance requirements associated with the aging fleet to employees. Determine if the air carrier shares and exchanges information that identifies actual or potential safety problems associated with their aging aircraft with all affected internal parties and FAA. Consider the effectiveness of the communications process and if it provides a means to improve operations and safety.

Varied Fleet Mix and Mixed Fleet Configuration

A varied fleet mix exists when an air carrier uses different series of aircraft and multiple types within the same fleet. A mixed fleet configuration exists when an air carrier uses a variety of different aircraft types or a mix of models of the same type within the same fleet. Many established carriers have long operated a varied mixed fleet and/or mixed fleet configurations. The implications for operating this type of fleet are even more significant for new entrant carriers, where resources and infrastructure may be a major consideration. These types of environments can significantly affect an air carrier's safety profile and the potential for failure in their systems, sub-systems, or elements. Consider the following when rating this indicator:

- Consider whether the air carrier has the resources and infrastructure to support a varied fleet mix operations and/or mixed fleet configuration. Determine whether the air carrier's management structure and operations approach have been adequate enough to handle the impact of a varied fleet mix and/or mixed fleet configuration. A varied fleet mix increases the demands for managing different maintenance procedures and processes, multiple maintenance manuals, crewmember and mechanic training, training manuals, ground support equipment, and scheduling and inventory costs. Consider the origin of the aircraft and what this means in terms of operational and system stability. Further determine what the air carrier's performance in this area might mean in terms of surveillance requirements.
- Consider the impact of a varied fleet mix and/or mixed fleet configuration on the air carrier's maintenance program. Determine if the systems, sub-systems, elements, and related infrastructure are adequate enough to meet the complex requirements associated with operations of a varied fleet and/or a mixed fleet configuration. Is the air carrier's parts control system adequate and effective? Does the air carrier have the necessary test equipment?
- Consider the impact of a varied fleet mix and/or mixed fleet configuration on the air carrier's operations program. Determine if the operations systems, sub-systems, elements and related infrastructure are adequate enough to meet the complex requirements associated with operations of a varied fleet and/or a mixed fleet configuration? Are the air carrier's flight operations system controls adequate and effective? Does the carrier have the necessary controls to handle the different cockpit configurations that will be present in a varied fleet mix? Further consider whether the air carrier has recognized the impact on the systems, sub-systems, and elements.
- Consider the strength of the air carrier's system controls. If they are well established with fully documented procedures, then the carrier may be able to have a varied fleet mix or mixed fleet configuration without affecting safety. Ensure that the system controls are not adversely affected as the composition of the carrier changes.

Complexity of Aircraft

The complexity of the aircraft in the air carrier's fleet can significantly affect an air carrier's safety and the potential for failure in their systems, sub-systems, or elements. A change in the complexity of the aircraft in the fleet can also affect operational and system stability. Complex aircraft generally incorporate more sophisticated technology. Often new or emerging technology is an extension or a further iteration of existing knowledge and methods. However, a change in complexity or technology may mean that the carrier must support both manual and automated processes and procedures for the different environments. Innovative technology can increase or decrease the potential for non-compliance with existing processes and controls. Consider the following when rating this indicator:

- Consider the type and age of the air carrier's technology. Complex aircraft are generally technology-driven, with more and diverse systems. The technology is considered complex when it is either new to the industry or the aircraft. Consider how the technology being introduced into the air carrier might affect the operations, maintenance, training programs, and systems. Further consider whether the air carrier is changing the sophistication level of technology (e.g., moving from the F28 to the F100) or implementing an entirely new type of technology (e.g., glass cockpit, FMS systems, and fly-by-wire systems).
- Consider the air carrier's preparedness for the new or different technology. Determine if the air carrier had access to the production or maintenance history of the new technology. If so, this information can help the air carrier in transitioning the new technology into their operations. If this information was not available to the carrier, the transition could pose a potential safety issue. The absence of an established body of knowledge and experience (e.g., industry standards) or unavailability of this information to the air carrier indicates that additional surveillance may be appropriate.
- Consider the impact of new technology on the air carrier's systems, sub-systems, and elements. The new technology may impact the air carrier's training program, tooling and testing equipment program, parts control and handling program, and the integration of these changes and differences across the carrier. Further consider whether the new technology places a requirement for special or additional equipment on the air carrier. If so, has the air carrier purchased and integrated the necessary equipment into their operation? Determine if the carrier will be able to support these types of changes throughout their operation. If not, there may be cause for additional surveillance.
- Consider the strength of the air carrier's system controls. If the systems are well established with fully documented processes and controls built in then having new technology may not negatively affect quality or safety. Determine whether or not the carrier has adapted their system controls to meet the requirements of the new technology. Consider the impact of not adapting their system controls on surveillance requirements.
- Consider the air carrier's performance history with regard to new technology. If this history indicates that the air carrier has implemented the processes and procedures necessary to successfully integrate new technology, then additional changes in technology may not have negative impacts. If the carrier encountered problems with previous changes in technology, additional surveillance may be appropriate.

Outsource (M, T, GH)

The current aviation industry is faced, more and more, with outsourcing of traditional carrier functions to independent contractors. While established air carriers outsource some of their major programs, the trend has been for the new entrant carriers with rapidly changing operations to start small and outsource high-cost items such as maintenance (M), training (T), and ground handling (GH). In addition, outsourcing has developed to the point where multiple levels of contractors could be involved in providing the service. The carrier's outsourcing policies can significantly affect their maintenance, training, and operations systems, sub-systems and elements and their overall safety. Consider the following when rating this indicator:

- Consider the scope of the air carrier's outsourcing program. Does the air carrier outsource any functions in maintenance, training, and/or operations? Consider the different types of contractual arrangements, such as leasing, that may exist between the carrier and its contractors. Determine if the primary contractor subcontracts any of its services (e.g., a part 121 carrier may contract for maintenance with a certificated part 145 repair station who, in turn, contracts some of the services to licensed mechanics not employed by the part 145 repair station). Consider how the air carrier's outsourcing policies affect surveillance requirements.
- Consider the qualifications of contractors used by the air carrier for outsourcing. Determine if contractors were approved by FAA prior to being authorized for use by the air carrier. Determine if FAA has completed any interim evaluations of the air carrier's contractors. If so, what were the results? Determine if all of the contractors performing substantial maintenance and training for an air carrier have been listed in the air carrier operations specifications.
- Consider the maintenance function that has been contracted out by the air carrier. Has the air carrier outsourced substantial heavy maintenance or emergency limited maintenance? Does it include everything between emergency limited and substantial heavy maintenance including B, C, and D checks? Outsourcing of maintenance could be at any level and could include anything not done by an employee of the air carrier.
- Consider the ground handling function that has been contracted out by the air carrier. Does the ground handling contract include support personnel? Has the carrier bought or leased ground space from another carrier? Does the ground handling contract include all station personnel? Ramp personnel only? De-icing personnel only? Fueling/refueling personnel only? Or some combination of ground handling staff? If the carrier is small, does the ground handling contract include maintenance?
- Consider the training program that has been contracted out by the air carrier. Determine if and how it addresses new hire requirements. Consider how the air carrier's outsourcing policies and contractual arrangements affect surveillance requirements.
- Consider the air carrier's oversight of the outsourcing program. The air carrier is responsible for ensuring that any outsourced maintenance, training, and ground handling functions are conducted in accordance with the air carrier's manuals. Determine whether the air carrier has an effective oversight program to manage its contractors. Have the air carrier's systems, sub-systems and elements been impacted by the lack of oversight? Determine if the air carrier's safety audit function has been enhanced to include the outsourced functions.

Seasonal Operations

Seasonal operations, or operations performed by an air carrier for a period of time during a particular season or time of year to satisfy a short-term need, can significantly affect an air carrier's safety. Seasonal operations, while limited in nature, require as much or more preparation and attention to the quality and safety of the services provided as regular operations. For example, carriers engaging in seasonal operations that occur during the winter months and target the consumer flying to and from ski resort areas must be prepared to manage aircraft de-icing and all of the associated requirements. If the air carrier does not normally fly this route, or only operates during the ski season, de-icing may not be part of their regular operations. Consider the following when rating this indicator:

- Consider the scope of the air carrier's seasonal operations. Consider the quantity, type, and location of the air carrier's seasonal operations. Consider how the seasonal operations affects systems, sub-systems, and elements.
- Consider the air carrier's performance history with regard to seasonal operations. Does the air carrier have experience in seasonal operations? Is that experience comparable to the air carrier's current seasonal operations? Has the air carrier encountered problems with seasonal operations? If so, additional surveillance may be appropriate.
- Consider whether the air carrier is structured and has systems, sub-systems, and elements designed to support seasonal operations. Determine if the air carrier has implemented the processes and procedures necessary to properly manage seasonal operations. Determine the adequacy and effectiveness of the air carrier's infrastructure to support the seasonal operations.
- Consider the impact of seasonal operations on the air carrier's audit function. Determine if the audit function includes any special considerations that result from seasonal operations. The carrier's capability to ensure that its core business functions during seasonal operations are fully integrated into its systems, sub-systems, and elements and reflects positively on its management control and oversight.

Relocation/Closing of Facilities

Quality control across the various types of stations and the carrier's capability to manage an integrated set of station operations are critical. Relocation or closing of a facility or facilities can significantly affect an air carrier's safety and the potential for failure in their systems, sub-systems, or elements. Relocation of a facility includes both adding a new facility and moving an existing facility to another site on the air carrier's approved route. Adding a new facility, relocating an existing facility, or closing a facility, can affect the air carrier's operational and system stability. The way maintenance, operations, and training programs are implemented and managed across a varied station base is an important criterion. This must be accomplished without affecting the quality and safety of ongoing operations. Consider the following when rating this indicator:

- Consider the number, type, and effectiveness of the stations maintained and managed by the air carrier. Determine if the carrier's facilities have remained relatively stable. Consider the number of new stations currently managed by the carrier. Consider the longevity of the facilities managed by the air carrier.
- Consider the air carrier's performance history with regard to relocation or closing of facilities. Determine whether the air carrier has effectively managed changes to facility bases. Consider the rate and pace at which the carrier adds, relocates, and/or closes facilities. If the change is steady, implemented over time, and is accompanied by appropriate training, documentation, and manual changes, it may be easily integrated into the current operation of the station(s). On the other hand, a change that is major, abrupt, haphazard, and/or occurs over a short timeframe may be a sign of potential trouble.
- Consider the impacts of adding, closing, or relocating a facility. New facilities may require more surveillance than older, established facilities. When the carrier adds a new facility, consider the background and experience of the personnel assigned to the new facility. Consider the impact that a change in facility has on the personnel requirements and whether the carrier has adequate resources and training. Determine if the addition, closing, or relocation has resulted in a change of station managers. The significance of the change in station management should be assessed to determine the potential impact on the carrier's system and operational stability. Further, if the changes of adding, closing, or relocating a facility are not consistently applied through training and procedures, and disseminated to personnel, the carrier may be faced with different and potentially inconsistent methods of operation. This can have a negative impact on both the quality and safety of the services provided by the station.
- Consider the strength of the air carrier's systems, processes and controls. Consistency in the carrier's systems and procedures is an indicator of their ability to manage a varied station base.

Lease Arrangements

The aviation industry operates in an environment that includes a variety of different leasing arrangements among air carriers and between air carriers and other business entities. These arrangements are increasingly used to meet market demands and seasonal operations. Not only have carriers begun to use a leasing option to obtain services, but also the number and types of leasing arrangements have increased.

A lease is any agreement by a person (the lessor) to provide an aircraft to another person (the lessee) who will use the aircraft for compensation or hire purposes. A "wet lease" arrangement is a leasing agreement whereby a certificate holder agrees to provide an aircraft and at least one crewmember to another air carrier. In contrast, a "dry lease" arrangement is any agreement in which a lessor such as an air carrier, bank, or leasing company leases an aircraft without any crewmembers to an air carrier (the lessee) and in which the lessee maintains operational control. An "interchange agreement" is any agreement in which the operational control of an aircraft is transferred for short periods of time from one air carrier to another air carrier in which the latter air carrier assumes responsibility for the operation of the aircraft at the time of transfer.

The variety of different leasing arrangements entered into by an air carrier can have a significant impact on their maintenance, training, and operations programs and their overall safety. Consider the following when rating this indicator:

- Determine the type of leasing arrangement the air carrier maintains. The air carrier may have a wet lease, dry lease, or interchange agreement in place with other entities.
- Consider whether the air carrier is structured and has systems, sub-systems, and elements designed to support the lease arrangements. If the carrier has chosen to enter into one or more leasing arrangement, determine the adequacy and effectiveness of the air carrier's infrastructure to support these arrangements and their related oversight responsibilities. Consider the effect of the air carrier's leasing arrangements on surveillance requirements.
- Consider the impacts of interchange agreement systems, sub-systems, and elements. Interchange agreements can have a major impact on normal carrier operations; therefore, special attention during surveillance may be warranted when an air carrier is a party to this type of arrangement.
- Consider the impact of lease agreements on the air carrier's systems, sub-systems, and elements. Consider whether or not any special lease requirements have been integrated into the systems. Determine if the air carrier's audit function has been enhanced to include any special considerations resulting from any of the air carrier's leasing arrangements.

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR SYSTEM STABILITY

Operational Stability

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		SPAS MANAGEMENT / ECONOMIC INDICATORS	CHANGE IN AIR CARRIER MANAGEMENT	TURNOVER IN PERSONNEL	REDUCTION IN WORKFORCE/ LAYOFFS/ BUY-OUTS	RAPID EXPANSION/ GROWTH	MERGER OR TAKEOVER	LABOR-MANAGEMENT RELATIONS			
	1.0	**AIRCRAFT CONFIGURATION CONTROL**										
	1.1	**Aircraft**										
High	1.1.1	Aircraft Airworthiness Requirements										
Medium	1.1.2	Appropriate Operational Equipment										
TBD	1.1.3	Special Flight Permits										
	1.2	**Records and Reporting Systems**										
High	1.2.1	Airworthiness Release or Log Book Entry										
Medium	1.2.2	Major Repairs and Alterations										
High	1.2.3	Maintenance Log/Recording Requirements										
Low	1.2.4	MIS Reports										
Low	1.2.5	Mechanical Reliability Reports (MRR)										
Low	1.2.6	Aircraft Listing										
	1.3	**Maintenance Organization**										
High	1.3.1	Maintenance Program										
High	1.3.2	Inspection Program										
High	1.3.3	Maintenance Facilities/Main Maintenance Base										
High	1.3.4	RII										
High	1.3.5	MEL/CDL/Deferred Maintenance										
High	1.3.6	AD Management										
High	1.3.7	Outsource Organization										
High	1.3.8	Control of Calibrated Tools and Test Equipment										
High	1.3.9	Engineering/Major Repairs and Alterations										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR SYSTEM STABILITY

Operational Stability

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		SPAS MANAGEMENT / ECONOMIC INDICATORS	CHANGE IN AIR CARRIER MANAGEMENT	TURNOVER IN PERSONNEL	REDUCTION IN WORKFORCE/ LAYOFFS/ BUY-OUTS	RAPID EXPANSION/ GROWTH	MERGER OR TAKEOVER	LABOR-MANAGEMENT RELATIONS			
High	1.3.10	Parts/Material Control/SUP										
High	1.3.11	Continuous Analysis and Surveillance (CAS)										
High	1.3.12	SFAR 36										
High	1.3.13	DAS										
Low	1.3.14	GMM/Equivalent										
Medium	1.3.15	Reliability Program										
Medium	1.3.16	Fueling										
High	1.3.17	Weight and Balance Program										
High	1.3.18	De-Icing Program										
Low	1.3.19	Lower Landing Minimums										
TBD	1.3.20	Engine Condition Monitoring										
TBD	1.3.21	Parts Pooling										
TBD	1.3.22	Parts Borrowing										
TBD	1.3.23	Short-term Escalations										
TBD	1.3.24	CASE										
	2.0	**MANUALS**										
	2.1	**Manual Management**										
Medium	2.1.1	Currency										
Medium	2.1.2	Content Consistency Across Manuals										
Medium	2.1.3	Distribution										
Medium	2.1.4	Availability										
Medium	2.1.5	Supplemental Operations Manual Requirements										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS **RISK INDICATORS FOR SYSTEM STABILITY** ***Operational Stability***												
CRITICALITY BASELINE	**AIRWORTHINESS ELEMENTS**		SPAS MANAGEMENT / ECONOMIC INDICATORS	CHANGE IN AIR CARRIER MANAGEMENT	TURNOVER IN PERSONNEL	REDUCTION IN WORKFORCE/ LAYOFFS/ BUY-OUTS	RAPID EXPANSION/ GROWTH	MERGER OR TAKEOVER	LABOR-MANAGEMENT RELATIONS			
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**										
	4.1	**Maintenance Personnel Qualifications**										
High	4.1.1	RII Personnel										
Medium	4.1.2	Maintenance Certificate Requirements										
	4.2	**Training Program**										
High	4.2.1	Maintenance Training Program										
High	4.2.2	RII Training Requirements										
Low	4.2.8	Simulators/Training Devices										
	4.4	**Mechanics and Repairmen Certification**										
Low	4.4.1	Recency of Experience										
Low	4.4.2	Display of Certificate										
Low	4.4.3	Privileges - Airframe and Powerplant										
Low	4.4.4	Privileges and Limitations for Repairmen										
	5.0	**ROUTE STRUCTURES**										
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**										
Medium	5.1.1	Line Stations (Servicing and Maintenance)										
Medium	5.1.2	Weather Reporting Facilities/SWARS Stations										
Medium	5.1.3	Non-Federal NAVAIDs										
Low	5.1.4	Altimeter Setting Sources										
TBD	5.1.8	ETOPS										
TBD	5.1.9	RVSM Authorization										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS **RISK INDICATORS FOR SYSTEM STABILITY** ***Operational Stability***												
CRITICALITY BASELINE	**AIRWORTHINESS ELEMENTS**		SPAS MANAGEMENT / ECONOMIC INDICATORS	CHANGE IN AIR CARRIER MANAGEMENT	TURNOVER IN PERSONNEL	REDUCTION IN WORKFORCE/ LAYOFFS/ BUY-OUTS	RAPID EXPANSION/ GROWTH	MERGER OR TAKEOVER	LABOR-MANAGEMENT RELATIONS			
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**										
	6.2	**Maintenance Personnel**										
Low	6.2.1	Duty Time										
	7.0	**TECHNICAL ADMINISTRATION**										
	7.1	**Key Personnel**										
Low	7.1.1	Director of Maintenance										
Low	7.1.2	Chief Inspector										
Low	7.1.3	Director of Safety										
Low	7.1.6	Maintenance Control										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR SYSTEM STABILITY

Air Carrier Dynamics

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		INSPECTION DEPARTMENT /SYSTEM	NEW/ MAJOR CHANGES TO PROGRAM	CAS SYSTEM	SAFETY SYSTEM	INTERNAL EVALUATION PROGRAM	BEST PRACTICES	RESOURCE MANAGE-MENT TRAINING	RISK MANAGE-MENT	COOPERATIVE RELATIONSHIP WITH FAA	HUMAN FACTORS
	1.0	**AIRCRAFT CONFIGURATION CONTROL**										
	1.1	**Aircraft**										
High	1.1.1	Aircraft Airworthiness Requirements										
Medium	1.1.2	Appropriate Operational Equipment										
TBD	1.1.3	Special Flight Permits										
	1.2	**Records and Reporting Systems**										
High	1.2.1	Airworthiness Release or Log Book Entry										
Medium	1.2.2	Major Repairs and Alterations										
High	1.2.3	Maintenance Log/Recording Requirements										
Low	1.2.4	MIS Reports										
Low	1.2.5	Mechanical Reliability Reports (MRR)										
Low	1.2.6	Aircraft Listing										
	1.3	**Maintenance Organization**										
High	1.3.1	Maintenance Program										
High	1.3.2	Inspection Program										
High	1.3.3	Maintenance Facilities/Main Maintenance Base										
High	1.3.4	RII										
High	1.3.5	MEL/CDL/Deferred Maintenance										
High	1.3.6	AD Management										
High	1.3.7	Outsource Organization										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR SYSTEM STABILITY

Air Carrier Dynamics

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		INSPECTION DEPARTMENT /SYSTEM	NEW/ MAJOR CHANGES TO PROGRAM	CAS SYSTEM	SAFETY SYSTEM	INTERNAL EVALUATION PROGRAM	BEST PRACTICES	RESOURCE MANAGE-MENT TRAINING	RISK MANAGE-MENT	COOPERATIVE RELATIONSHIP WITH FAA	HUMAN FACTORS
High	1.3.8	Control of Calibrated Tools and Test Equipment										
High	1.3.9	Engineering/Major Repairs and Alterations										
High	1.3.10	Parts/Material Control/SUP										
High	1.3.11	Continuous Analysis and Surveillance (CAS)										
High	1.3.12	SFAR 36										
High	1.3.13	DAS										
Low	1.3.14	GMM/Equivalent										
Medium	1.3.15	Reliability Program										
Medium	1.3.16	Fueling										
High	1.3.17	Weight and Balance Program										
High	1.3.18	De-Icing Program										
Low	1.3.19	Lower Landing Minimums										
TBD	1.3.20	Engine Condition Monitoring										
TBD	1.3.21	Parts Pooling										
TBD	1.3.22	Parts Borrowing										
TBD	1.3.23	Short-term Escalations										
TBD	1.3.24	CASE										
	2.0	**MANUALS**										
	2.1	**Manual Management**										
Medium	2.1.1	Currency										
Medium	2.1.2	Content Consistency Across Manuals										
Medium	2.1.3	Distribution										
Medium	2.1.4	Availability										
Medium	2.1.5	Supplemental Operations Manual Requirements										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR SYSTEM STABILITY

Air Carrier Dynamics

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		INSPECTION DEPARTMENT /SYSTEM	NEW/ MAJOR CHANGES TO PROGRAM	CAS SYSTEM	SAFETY SYSTEM	INTERNAL EVALUATION PROGRAM	BEST PRACTICES	RESOURCE MANAGE-MENT TRAINING	RISK MANAGE-MENT	COOPERATIVE RELATIONSHIP WITH FAA	HUMAN FACTORS
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**										
	4.1	**Maintenance Personnel Qualifications**										
High	4.1.1	RII Personnel										
Medium	4.1.2	Maintenance Certificate Requirements										
	4.2	**Training Program**										
High	4.2.1	Maintenance Training Program										
High	4.2.2	RII Training Requirements										
Low	4.2.8	Simulators/Training Devices										
	4.4	**Mechanics and Repairmen Certification**										
Low	4.4.1	Recency of Experience										
Low	4.4.2	Display of Certificate										
Low	4.4.3	Privileges - Airframe and Powerplant										
Low	4.4.4	Privileges and Limitations for Repairmen										
	5.0	**ROUTE STRUCTURES**										
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**										
Medium	5.1.1	Line Stations (Servicing and Maintenance)										
Medium	5.1.2	Weather Reporting Facilities/ SWARS Stations										
Medium	5.1.3	Non-Federal NAVAIDs										
Low	5.1.4	Altimeter Setting Sources										
TBD	5.1.8	ETOPS										
TBD	5.1.9	RVSM Authorization										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR SYSTEM STABILITY

Air Carrier Dynamics

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		INSPECTION DEPARTMENT /SYSTEM	NEW/ MAJOR CHANGES TO PROGRAM	CAS SYSTEM	SAFETY SYSTEM	INTERNAL EVALUATION PROGRAM	BEST PRACTICES	RESOURCE MANAGE-MENT TRAINING	RISK MANAGE-MENT	COOPERATIVE RELATIONSHIP WITH FAA	HUMAN FACTORS
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**										
	6.2	**Maintenance Personnel**										
Low	6.2.1	Duty Time										
	7.0	**TECHNICAL ADMINISTRATION**										
	7.1	**Key Personnel**										
Low	7.1.1	Director of Maintenance										
Low	7.1.2	Chief Inspector										
Low	7.1.3	Director of Safety										
Low	7.1.6	Maintenance Control										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS **RISK INDICATORS FOR OPERATIONAL RISKS** ***Performance History***												
CRITICALITY BASELINE	**AIRWORTHINESS ELEMENTS**		ENFORCEMENT ACTIONS	ACCIDENTS/ INCIDENTS/ OCCURRENCES	DOD/ RASIP	SELF-DISCLOSURES	SAFETY HOTLINE/ COMPLAINTS	NEW ENTRANT CARRIER	SPAS TREND INDICATORS			
	1.0	**AIRCRAFT CONFIGURATION CONTROL**										
	1.1	**Aircraft**										
High	1.1.1	Aircraft Airworthiness Requirements										
Medium	1.1.2	Appropriate Operational Equipment										
TBD	1.1.3	Special Flight Permits										
	1.2	**Records and Reporting Systems**										
High	1.2.1	Airworthiness Release or Log Book Entry										
Medium	1.2.2	Major Repairs and Alterations										
High	1.2.3	Maintenance Log/Recording Requirements										
Low	1.2.4	MIS Reports										
Low	1.2.5	Mechanical Reliability Reports (MRR)										
Low	1.2.6	Aircraft Listing										
	1.3	**Maintenance Organization**										
High	1.3.1	Maintenance Program										
High	1.3.2	Inspection Program										
High	1.3.3	Maintenance Facilities and Main Maintenance Base										
High	1.3.4	RII										
High	1.3.5	MEL/CDL/Deferred Maintenance										
High	1.3.6	AD Management										
High	1.3.7	Outsource Organization										
High	1.3.8	Control of Calibrated Tools and Test Equipment										
High	1.3.9	Engineering/Major Repairs and Alterations										
High	1.3.10	Parts/Material Control/SUP										
High	1.3.11	Continuous Analysis and Surveillance (CAS)										
High	1.3.12	SFAR 36										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR OPERATIONAL RISKS

Performance History

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		ENFORCEMENT ACTIONS	ACCIDENTS/ INCIDENTS/ OCCURRENCES	DOD/ RASIP	SELF-DISCLOSURES	SAFETY HOTLINE/ COMPLAINTS	NEW ENTRANT CARRIER	SPAS TREND INDICATORS			
High	1.3.13	DAS										
Low	1.3.14	GMM/Equivalent										
Medium	1.3.15	Reliability Program										
Medium	1.3.16	Fueling										
High	1.3.17	Weight and Balance Program										
High	1.3.18	De-Icing Program										
Low	1.3.19	Lower Landing Minimums										
TBD	1.3.20	Engine Condition Monitoring										
TBD	1.3.21	Parts Pooling										
TBD	1.3.22	Parts Borrowing										
TBD	1.3.23	Short-term Escalations										
TBD	1.3.24	CASE										
	2.0	**MANUALS**										
	2.1	**Manual Management**										
Medium	2.1.1	Currency										
Medium	2.1.2	Content Consistency Across Manuals										
Medium	2.1.3	Distribution										
Medium	2.1.4	Availability										
Medium	2.1.5	Supplemental Operations Manual Requirements										
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**										
	4.1	**Maintenance Personnel Qualifications**										
High	4.1.1	RII Personnel										
Medium	4.1.2	Maintenance Certificate Requirements										
	4.2	**Training Program**										
High	4.2.1	Maintenance Training Program										
High	4.2.2	RII Training Requirements										
Low	4.2.8	Simulators/Training Devices										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR OPERATIONAL RISKS

Performance History

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		ENFORCEMENT ACTIONS	ACCIDENTS/ INCIDENTS/ OCCURRENCES	DOD/ RASIP	SELF-DISCLOSURES	SAFETY HOTLINE/ COMPLAINTS	NEW ENTRANT CARRIER	SPAS TREND INDICATORS			
	4.4	**Mechanics and Repairmen Certification**										
Low	4.4.1	Recency of Experience										
Low	4.4.2	Display of Certificate										
Low	4.4.3	Privileges - Airframe and Powerplant										
Low	4.4.4	Privileges and Limitations for Repairmen										
	5.0	**ROUTE STRUCTURES**										
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**										
Medium	5.1.1	Line Stations (Servicing and Maintenance)										
Medium	5.1.2	Weather Reporting Facilities/SWARS Stations										
Medium	5.1.3	Non-Federal NAVAIDs										
Low	5.1.4	Altimeter Setting Sources										
TBD	5.1.8	ETOPS										
TBD	5.1.9	RVSM Authorization										
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**										
	6.2	**Maintenance Personnel**										
Low	6.2.1	Duty Time										
	7.0	**TECHNICAL ADMINISTRATION**										
	7.1	**Key Personnel**										
Low	7.1.1	Director of Maintenance										
Low	7.1.2	Chief Inspector										
Low	7.1.3	Director of Safety										
Low	7.1.6	Maintenance Control										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS **RISK INDICATORS FOR OPERATIONAL RISKS** ***Environmental Criticality***												
CRITICALITY BASELINE	**AIRWORTHINESS ELEMENTS**		AGE OF FLEET	VARIED FLEET MIX	COMPLEXITY OF AIRCRAFT	OUTSOURCE (M, T, GH)	SEASONAL OPERATIONS	RELOCATION/ CLOSING OF FACILITIES	LEASE ARRANGEMENT			
	1.0	**AIRCRAFT CONFIGURATION CONTROL**										
	1.1	**Aircraft**										
High	1.1.1	Aircraft Airworthiness Requirements										
Medium	1.1.2	Appropriate Operational Equipment										
TBD	1.1.3	Special Flight Permits										
	1.2	**Records and Reporting Systems**										
High	1.2.1	Airworthiness Release or Log Book Entry										
Medium	1.2.2	Major Repairs and Alterations										
High	1.2.3	Maintenance Log/Recording Requirements										
Low	1.2.4	MIS Reports										
Low	1.2.5	Mechanical Reliability Reports (MRR)										
Low	1.2.6	Aircraft Listing										
	1.3	**Maintenance Organization**										
High	1.3.1	Maintenance Program										
High	1.3.2	Inspection Program										
High	1.3.3	Maintenance Facilities/Main Maintenance Base										
High	1.3.4	RII										
High	1.3.5	MEL/CDL/Deferred Maintenance										
High	1.3.6	AD Management										
High	1.3.7	Outsource Organization										
High	1.3.8	Control of Calibrated Tools and Test Equipment										
High	1.3.9	Engineering/Major Repairs and Alterations										
High	1.3.10	Parts/Material Control/SUP										
High	1.3.11	Continuous Analysis and Surveillance (CAS)										
High	1.3.12	SFAR 36										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR OPERATIONAL RISKS

Environmental Criticality

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		AGE OF FLEET	VARIED FLEET MIX	COMPLEXITY OF AIRCRAFT	OUTSOURCE (M, T, GH)	SEASONAL OPERATIONS	RELOCATION/ CLOSING OF FACILITIES	LEASE ARRANGEMENT			
High	1.3.13	DAS										
Low	1.3.14	GMM/Equivalent										
Medium	1.3.15	Reliability Program										
Medium	1.3.16	Fueling										
High	1.3.17	Weight and Balance Program										
High	1.3.18	De-Icing Program										
Low	1.3.19	Lower Landing Minimums										
TBD	1.3.20	Engine Condition Monitoring										
TBD	1.3.21	Parts Pooling										
TBD	1.3.22	Parts Borrowing										
TBD	1.3.23	Short-term Escalations										
TBD	1.3.24	CASE										
	2./0	**MANUALS**										
	2.1	**Manual Management**										
Medium	2.1.1	Currency										
Medium	2.1.2	Content Consistency Across Manuals										
Medium	2.1.3	Distribution										
Medium	2.1.4	Availability										
Medium	2.1.5	Supplemental Operations Manual Requirements										
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**										
	4.1	**Maintenance Personnel Qualifications**										
High	4.1.1	RII Personnel										
Medium	4.1.2	Maintenance Certificate Requirements										
	4.2	**Training Program**										
High	4.2.1	Maintenance Training Program										
High	4.2.2	RII Training Requirements										
Low	4.2.8	Simulators/Training Devices										

AIR CARRIER ASSESSMENT TOOL - AIRWORTHINESS

RISK INDICATORS FOR OPERATIONAL RISKS

Environmental Criticality

CRITICALITY BASELINE	AIRWORTHINESS ELEMENTS		AGE OF FLEET	VARIED FLEET MIX	COMPLEXITY OF AIRCRAFT	OUTSOURCE (M, T, GH)	SEASONAL OPERATIONS	RELOCATION/ CLOSING OF FACILITIES	LEASE ARRANGEMENT			
	4.4	**Mechanics and Repairmen Certification**										
Low	4.4.1	Recency of Experience										
Low	4.4.2	Display of Certificate										
Low	4.4.3	Privileges - Airframe and Powerplant										
Low	4.4.4	Privileges and Limitations for Repairmen										
	5.0	**ROUTE STRUCTURES**										
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**										
Medium	5.1.1	Line Stations (Servicing and Maintenance)										
Medium	5.1.2	Weather Reporting Facilities/ SWARS Stations										
Medium	5.1.3	Non-Federal NAVAIDs										
Low	5.1.4	Altimeter Setting Sources										
TBD	5.1.8	ETOPS										
TBD	5.1.9	RVSM Authorization										
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**										
	6.2	**Maintenance Personnel**										
Low	6.2.1	Duty Time										
	7.0	**TECHNICAL ADMINISTRATION**										
	7.1	**Key Personnel**										
Low	7.1.1	Director of Maintenance										
Low	7.1.2	Chief Inspector										
Low	7.1.3	Director of Safety										
Low	7.1.6	Maintenance Control										

AIRWORTHINESS
AIR CARRIER ASSESSMENT TOOL RESULTS

Air Carrier: _____ **Assessment Year:** _____
Principal Maintenance Inspector: _____ **CHDO/CMO:** _____
Principal Avionics Inspector: _____ **Air Carrier Designator:** _____

AIRWORTHINESS ELEMENTS		ASSESSMENT ACTUAL						PERCENTAGE	ASSESSMENT VALUE	CRITICALITY WEIGHT	WEIGHTED PERCENTAGE
		OS	CD	PH	EC	Total	Total Possible				
1.1.1	Aircraft Airworthiness Requirements						31			3	
1.1.3	Special Flight Permits						31			TBD	
1.1.2	Appropriate Operational Equipment						31			2	
Aircraft Sub-System Weighted Percentage Average											
1.2.1	Airworthiness Release or Log Book Entry						31			3	
1.2.2	Major Repairs and Alterations						31			2	
1.2.3	Maintenance Log/Recording Requirements						31			3	
1.2.4	MIS Reports						31			1	
1.2.5	Mechanical Reliability Reports (MRR)						31			1	
1.2.6	Aircraft Listing						31			1	
Records and Reporting Systems Sub-System Weighted Percentage Average											
1.3.1	Maintenance Program						31			3	
1.3.2	Inspection Program						31			3	
1.3.3	Maintenance Facilities/Main Maintenance Base						31			3	
1.3.4	RII						31			3	
1.3.5	MEL/CDL/Deferred Maintenance						31			3	
1.3.6	AD Management						31			3	
1.3.7	Outsource Organization						31			3	
1.3.8	Control of Calibrated Tools and Test Equipment						31			3	
1.3.9	Engineering/Major Repairs and Alterations						31			3	
1.3.10	Parts/Material Control/SUP						31			3	
1.3.11	Continuous Analysis and Surveillance (CAS)						31			3	

AIRWORTHINESS ELEMENTS		ASSESSMENT ACTUAL						PERCENTAGE	ASSESSMENT VALUE	CRITICALITY WEIGHT	WEIGHTED PERCENTAGE
		OS	**CD**	**PH**	**EC**	**Total**	**Total Possible**				
1.3.12	SFAR 36						**31**			**3**	
1.3.13	DAS						**31**			**3**	
1.3.14	GMM/Equivalent						**31**			**1**	
1.3.15	Reliability Program						**31**			**2**	
1.3.16	Fueling						**31**			**2**	
1.3.17	Weight and Balance Program						**31**			**3**	
1.3.18	De-Icing Program						**31**			**3**	
1.3.19	Lower Landing Minimums						**31**			**1**	
1.3.20	Engine Condition Monitoring						**31**			**TBD**	
1.3.21	Parts Pooling						**31**			**TBD**	
1.3.22	Parts Borrowing						**31**			**TBD**	
1.3.23	Short-term Escalations						**31**			**TBD**	
1.3.24	CASE						**31**			**TBD**	
Maintenance Organization Sub-System Weighted Percentage Average											
2.1.1	Currency						**31**			**2**	
2.1.2	Content Consistency Across Manuals						**31**			2	
2.1.3	Distribution						**31**			2	
2.1.4	Availability						**31**			2	
2.1.5	Supplemental Operations Manual Requirements						**31**			2	
Manual Management Sub-System Weighted Percentage Average											
4.1.1	RII Personnel						**31**			3	
4.1.2	Maintenance Certificate Requirements						**31**			2	
Maintenance Personnel Qualifications Sub-System Weighted Percentage Average											
4.2.1	Maintenance Training Program						**31**			3	
4.2.2	RII Training Requirements						**31**			3	
4.2.8	Simulators/Training Devices						**31**			1	
Training Program Sub-System Weighted Percentage Average											
4.4.1	Recency of Experience						**31**			1	
4.4.2	Display of Certificate						**31**			1	

AIRWORTHINESS ELEMENTS		ASSESSMENT ACTUAL						PERCENTAGE	ASSESSMENT VALUE	CRITICALITY WEIGHT	WEIGHTED PERCENTAGE
		OS	**CD**	**PH**	**EC**	**Total**	**Total Possible**				
4.4.3	Privileges - Airframe and Powerplant						**31**			1	
4.4.4	Privileges and Limitations for Repairmen						**31**			1	
Mechanics and Repairmen Certification Sub-System Weighted Percentage Average											
5.1.1	Line Stations (Servicing and Maintenance)						**31**			2	
5.1.2	Weather Reporting Facilities/SWARS Stations						**31**			2	
5.1.3	Non-Federal NAVAIDs						**31**			2	
5.1.4	Altimeter Setting Sources						**31**			1	
5.1.8	ETOPS						**31**			TBD	
5.1.9	RVSM Authorization						**31**			TBD	
Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial Sub-System Weighted Percentage Average											
6.2.1	Duty Time						**31**			**1**	
Maintenance Personnel Sub-System Weighted Percentage Average											
7.1.1	Director of Maintenance						**31**			**1**	
7.1.2	Chief Inspector						**31**			**1**	
7.1.3	Director of Safety						**31**			**1**	
7.1.6	Maintenance Control						**31**			**1**	
Key Personnel Sub-System Weighted Percentage Average											
TOTAL AIRWORTHINESS RESULT											

Principal Maintenance Inspector: _____ **Date:** _____
Principal Avionics Inspector: _____ **Date:** _____

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR SYSTEM STABILITY

Operational Stability

CRITICALITY BASELINE	OPERATIONS ELEMENTS		SPAS MANAGEMENT /ECONOMIC INDICATORS	CHANGE IN AIR CARRIER MANAGEMENT	TURNOVER IN PERSONNEL	REDUCTION IN WORKFORCE/ LAYOFFS/ BUY-OUTS	RAPID EXPANSION/ GROWTH	MERGER OR TAKEOVER	LABOR-MANAGEMENT RELATIONS			
	1.0	**AIRCRAFT CONFIGURATION CONTROL**										
	1.1	**Aircraft**										
Medium	1.1.2	Appropriate Operational Equipment										
	2.0	**MANUALS**										
	2.1	**Manual Management**										
Medium	2.1.1	Currency										
Medium	2.1.2	Content Consistency Across Manuals										
Medium	2.1.3	Distribution										
Medium	2.1.4	Availability										
Medium	2.1.5	Supplemental Operations Manual Requirements										
	3.0	**FLIGHT OPERATIONS**										
	3.1	**Air Carrier Programs and Procedures**										
Medium	3.1.1	Passenger Handling										
Medium	3.1.2	Flight Attendant Duties/Cabin Procedures										
High	3.1.3	Airman Duties/Flight Deck Procedures										
Medium	3.1.4	Operational Control										
Medium	3.1.5	Carry-On Baggage										
Medium	3.1.6	Exit Seating										
High	3.1.7	De-Icing Program										
High	3.1.8	Carriage of Cargo										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR SYSTEM STABILITY

Operational Stability

CRITICALITY BASELINE	OPERATIONS ELEMENTS		SPAS MANAGEMENT /ECONOMIC INDICATORS	CHANGE IN AIR CARRIER MANAGEMENT	TURNOVER IN PERSONNEL	REDUCTION IN WORKFORCE/ LAYOFFS/ BUY-OUTS	RAPID EXPANSION/ GROWTH	MERGER OR TAKEOVER	LABOR-MANAGEMENT RELATIONS			
High	3.1.9	Aircraft Performance Operating Limitations										
Low	3.1.10	Lower Landing Minimums										
TBD	3.1.11	Computer Based Record Keeping										
TBD	3.1.12	HAZMAT / Dangerous Goods Program										
TBD	3.1.13	Other Personnel with Operational Control										
	3.2	**Operational Release**										
High	3.2.1	Dispatch or Flight Release										
High	3.2.2	Flight/Load Manifest/Weight and Balance Control										
High	3.2.3	MEL/CDL Procedures										
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**										
	4.2	**Training Program**										
High	4.2.3	Training of Flight Crewmembers										
High	4.2.4	Training of Flight Attendants										
High	4.2.5	Training of Dispatcher										
High	4.2.6	Training of Station Personnel										
High	4.2.7	Training of Check Airman and Instructors										
High	4.2.8	Simulators/Training Devices										
High	4.2.9	Outsource Crewmember Training										
TBD	4.2.10	Aircrew Designated Examiner										
TBD	4.2.11	Training of Flight Followers										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR SYSTEM STABILITY

Operational Stability

CRITICALITY BASELINE	OPERATIONS ELEMENTS		SPAS MANAGEMENT /ECONOMIC INDICATORS	CHANGE IN AIR CARRIER MANAGEMENT	TURNOVER IN PERSONNEL	REDUCTION IN WORKFORCE/ LAYOFFS/ BUY-OUTS	RAPID EXPANSION/ GROWTH	MERGER OR TAKEOVER	LABOR-MANAGEMENT RELATIONS			
	4.3	**Crewmember and Dispatch Qualifications**										
Medium	4.3.1	Pilot Operating Limitations/Recent Experience										
Medium	4.3.2	Appropriate Airman/Crewmember Checks and Qualifications										
TBD	4.3.3	Advanced Qualification Program (AQP)										
	5.0	**ROUTE STRUCTURES**										
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**										
Medium	5.1.5	Station Facilities										
Low	5.1.6	Use of Approved Routes, Areas, & Airports										
TBD	5.1.7	Special Navigation Areas of Operation										
TBD	5.1.8	ETOPS										
TBD	5.1.9	RVSM Authorization										
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**										
	6.1	**Airman and Crewmember Limitations for Domestic, Flag, Supplemental, and Commercial**										
Medium	6.1.1	Scheduling/Reporting System										
Medium	6.1.2	Flight Crewmember Flight/Duty/Rest Time										
Medium	6.1.3	Flight Attendant Duty/Rest Time										
Medium	6.1.4	Dispatcher Duty/Rest Time										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR SYSTEM STABILITY

Operational Stability

CRITICALITY BASELINE	OPERATIONS ELEMENTS		SPAS MANAGEMENT /ECONOMIC INDICATORS	CHANGE IN AIR CARRIER MANAGEMENT	TURNOVER IN PERSONNEL	REDUCTION IN WORKFORCE/ LAYOFFS/ BUY-OUTS	RAPID EXPANSION/ GROWTH	MERGER OR TAKEOVER	LABOR-MANAGEMENT RELATIONS			
	7.0	**TECHNICAL ADMINISTRATION**										
	7.1	**Key Personnel**										
Low	7.1.3	Director of Safety										
Low	7.1.4	Director of Operations										
Low	7.1.5	Chief Pilot										
	7.2	**Other Programs**										
TBD	7.2.1	Safety Program (Ground and Flight)										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR SYSTEM STABILITY

Air Carrier Dynamics

CRITICALITY BASELINE	OPERATIONS ELEMENTS		NEW/ MAJOR CHANGES TO PROGRAM	SAFETY SYSTEM	INTERNAL EVALUATION PROGRAM	BEST PRACTICES	RESOURCE MANAGE-MENT TRAINING	RISK MANAGE-MENT	COOPERATIVE RELATIONSHIP WITH FAA	HUMAN FACTORS		
	1.0	**AIRCRAFT CONFIGURATION CONTROL**										
	1.1	**Aircraft**										
Medium	1.1.2	Appropriate Operational Equipment										
	2.0	**MANUALS**										
	2.1	**Manual Management**										
Medium	2.1.1	Currency										
Medium	2.1.2	Content Consistency Across Manuals										
Medium	2.1.3	Distribution										
Medium	2.1.4	Availability										
Medium	2.1.5	Supplemental Operations Manual Requirements										
	3.0	**FLIGHT OPERATIONS**										
	3.1	**Air Carrier Programs and Procedures**										
Medium	3.1.1	Passenger Handling										
Medium	3.1.2	Flight Attendant Duties/Cabin Procedures										
High	3.1.3	Airman Duties/Flight Deck Procedures										
Medium	3.1.4	Operational Control										
Medium	3.1.5	Carry-On Baggage										
Medium	3.1.6	Exit Seating										
High	3.1.7	De-Icing Program										
High	3.1.8	Carriage of Cargo										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR SYSTEM STABILITY

Air Carrier Dynamics

CRITICALITY BASELINE	OPERATIONS ELEMENTS		NEW/ MAJOR CHANGES TO PROGRAM	SAFETY SYSTEM	INTERNAL EVALUATION PROGRAM	BEST PRACTICES	RESOURCE MANAGE-MENT TRAINING	RISK MANAGE-MENT	COOPERATIVE RELATIONSHIP WITH FAA	HUMAN FACTORS		
High	3.1.9	Aircraft Performance Operating Limitations										
Low	3.1.10	Lower Landing Minimums										
TBD	3.1.11	Computer Based Record Keeping										
TBD	3.1.12	HAZMAT / Dangerous Goods Program										
TBD	3.1.13	Other Personnel with Operational Control										
	3.2	**Operational Release**										
High	3.2.1	Dispatch or Flight Release										
High	3.2.2	Flight/Load Manifest/Weight and Balance Control										
High	3.2.3	MEL/CDL Procedures										
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**										
	4.2	**Training Program**										
High	4.2.3	Training of Flight Crewmembers										
High	4.2.4	Training of Flight Attendants										
High	4.2.5	Training of Dispatcher										
High	4.2.6	Training of Station Personnel										
High	4.2.7	Training of Check Airman and Instructors										
High	4.2.8	Simulators/Training Devices										
High	4.2.9	Outsource Crewmember Training										
TBD	4.2.10	Aircrew Designated Examiner										
TBD	4.2.11	Training of Flight Followers										
	4.3	**Crewmember and Dispatch Qualifications**										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR SYSTEM STABILITY

Air Carrier Dynamics

CRITICALITY BASELINE	OPERATIONS ELEMENTS		NEW/ MAJOR CHANGES TO PROGRAM	SAFETY SYSTEM	INTERNAL EVALUATION PROGRAM	BEST PRACTICES	RESOURCE MANAGE-MENT TRAINING	RISK MANAGE-MENT	COOPERATIVE RELATIONSHIP WITH FAA	HUMAN FACTORS		
Medium	4.3.1	Pilot Operating Limitations/Recent Experience										
Medium	4.3.2	Appropriate Airman/Crewmember Checks and Qualifications										
TBD	4.3.3	Advanced Qualification Program (AQP)										
	5.0	**ROUTE STRUCTURES**										
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**										
Medium	5.1.5	Station Facilities										
Low	5.1.6	Use of Approved Routes, Areas, & Airports										
TBD	5.1.7	Special Navigation Areas of Operation										
TBD	5.1.8	ETOPS										
TBD	5.1.9	RVSM Authorization										
	6.0	**AIRMAN AND CREW MEMBER FLIGHT REST AND DUTY TIME**										
	6.1	**Airman and Crewmember Limitations for Domestic, Flag, Supplemental, and Commercial**										
Medium	6.1.1	Scheduling/Reporting System										
Medium	6.1.2	Flight Crewmember Flight/Duty/Rest Time										
Medium	6.1.3	Flight Attendant Duty/Rest Time										
Medium	6.1.4	Dispatcher Duty/Rest Time										
	7.0	**TECHNICAL ADMINISTRATION**										
	7.1	**Key Personnel**										
Low	7.1.3	Director of Safety										
Low	7.1.4	Director of Operations										
Low	7.1.5	Chief Pilot										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR SYSTEM STABILITY

Air Carrier Dynamics

CRITICALITY BASELINE	OPERATIONS ELEMENTS		NEW/ MAJOR CHANGES TO PROGRAM	SAFETY SYSTEM	INTERNAL EVALUATION PROGRAM	BEST PRACTICES	RESOURCE MANAGE-MENT TRAINING	RISK MANAGE-MENT	COOPERATIVE RELATIONSHIP WITH FAA	HUMAN FACTORS		
	7.2	**Other Programs**										
TBD	7.2.1	Safety Program (Ground and Flight)										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR OPERATIONAL RISKS

Performance History

CRITICALITY BASELINE	OPERATIONS ELEMENTS		ENFORCEMENT ACTIONS	ACCIDENTS/ INCIDENTS/ OCCURRENCES	DOD/ RASIP	SELF-DISCLOSURES	SAFETY HOTLINE/ COMPLAINTS	NEW ENTRANT CARRIER	SPAS TREND INDICATORS			
	1.0	**AIRCRAFT CONFIGURATION CONTROL**										
	1.1	**Aircraft**										
Medium	1.1.2	Appropriate Operational Equipment										
	2.0	**MANUALS**										
	2.1	**Manual Management**										
Medium	2.1.1	Currency										
Medium	2.1.2	Content Consistency Across Manuals										
Medium	2.1.3	Distribution										
Medium	2.1.4	Availability										
Medium	2.1.5	Supplemental Operations Manual Requirements										
	3.0	**FLIGHT OPERATIONS**										
	3.1	**Air Carrier Programs and Procedures**										
Medium	3.1.1	Passenger Handling										
Medium	3.1.2	Flight Attendant Duties/Cabin Procedures										
High	3.1.3	Airman Duties/Flight Deck Procedures										
Medium	3.1.4	Operational Control										
Medium	3.1.5	Carry-On Baggage										
Medium	3.1.6	Exit Seating										
High	3.1.7	De-Icing Program										
High	3.1.8	Carriage of Cargo										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR OPERATIONAL RISKS

Performance History

CRITICALITY BASELINE	OPERATIONS ELEMENTS		ENFORCEMENT ACTIONS	ACCIDENTS/ INCIDENTS/ OCCURRENCES	DOD/ RASIP	SELF-DISCLOSURES	SAFETY HOTLINE/ COMPLAINTS	NEW ENTRANT CARRIER	SPAS TREND INDICATORS			
High	3.1.9	Aircraft Performance Operating Limitations										
Low	3.1.10	Lower Landing Minimums										
TBD	3.1.11	Computer Based Record Keeping										
TBD	3.1.12	HAZMAT / Dangerous Goods Program										
TBD	3.1.13	Other Personnel with Operational Control										
	3.2	**Operational Release**										
High	3.2.1	Dispatch or Flight Release										
High	3.2.2	Flight/Load Manifest/Weight and Balance Control										
High	3.2.3	MEL/CDL Procedures										
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**										
	4.2	**Training Program**										
High	4.2.3	Training of Flight Crewmembers										
High	4.2.4	Training of Flight Attendants										
High	4.2.5	Training of Dispatcher										
High	4.2.6	Training of Station Personnel										
High	4.2.7	Training of Check Airman and Instructors										
High	4.2.8	Simulators/Training Devices										
High	4.2.9	Outsource Crewmember Training										
TBD	4.2.10	Aircrew Designated Examiner										
TBD	4.2.11	Training of Flight Followers										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR OPERATIONAL RISKS

Performance History

CRITICALITY BASELINE	OPERATIONS ELEMENTS		ENFORCEMENT ACTIONS	ACCIDENTS/ INCIDENTS/ OCCURRENCES	DOD/ RASIP	SELF-DISCLOSURES	SAFETY HOTLINE/ COMPLAINTS	NEW ENTRANT CARRIER	SPAS TREND INDICATORS			
	4.3	**Crewmember and Dispatch Qualifications**										
Medium	4.3.1	Pilot Operating Limitations/Recent Experience										
Medium	4.3.2	Appropriate Airman/Crewmember Checks and Qualifications										
TBD	4.3.3	Advanced Qualification Program (AQP)										
	5.0	**ROUTE STRUCTURES**										
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**										
Medium	5.1.5	Station Facilities										
Low	5.1.6	Use of Approved Routes, Areas, & Airports										
TBD	5.1.7	Special Navigation Areas of Operation										
TBD	5.1.8	ETOPS										
TBD	5.1.9	RVSM Authorization										
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**										
	6.1	**Airman and Crewmember Limitations for Domestic, Flag, Supplemental, and Commercial**										
Medium	6.1.1	Scheduling/Reporting System										
Medium	6.1.2	Flight Crewmember Flight/Duty/Rest Time										
Medium	6.1.3	Flight Attendant Duty/Rest Time										
Medium	6.1.4	Dispatcher Duty/Rest Time										
	7.0	**TECHNICAL ADMINISTRATION**										
	7.1	**Key Personnel**										
Low	7.1.3	Director of Safety										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR OPERATIONAL RISKS

Performance History

CRITICALITY BASELINE	OPERATIONS ELEMENTS		ENFORCEMENT ACTIONS	ACCIDENTS/ INCIDENTS/ OCCURRENCES	DOD/ RASIP	SELF-DISCLOSURES	SAFETY HOTLINE/ COMPLAINTS	NEW ENTRANT CARRIER	SPAS TREND INDICATORS			
Low	7.1.4	Director of Operations										
Low	7.1.5	Chief Pilot										
	7.2	**Other Programs**										
TBD	7.2.1	Safety Program (Ground and Flight)										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR OPERATIONAL RISKS

Environmental Criticality

CRITICALITY BASELINE	OPERATIONS ELEMENTS		AGE OF FLEET	VARIED FLEET MIX	COMPLEXITY OF AIRCRAFT	OUTSOURCE (M, T, GH)	SEASONAL OPERATIONS	RELOCATION/ CLOSING OF FACILITIES	LEASE ARRANGEMENT			
	1.0	**AIRCRAFT CONFIGURATION CONTROL**										
	1.1	**Aircraft**										
Medium	1.1.2	Appropriate Operational Equipment										
	2.0	**MANUALS**										
	2.1	**Manual Management**										
Medium	2.1.1	Currency										
Medium	2.1.2	Content Consistency Across Manuals										
Medium	2.1.3	Distribution										
Medium	2.1.4	Availability										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR OPERATIONAL RISKS

Environmental Criticality

CRITICALITY BASELINE	OPERATIONS ELEMENTS		AGE OF FLEET	VARIED FLEET MIX	COMPLEXITY OF AIRCRAFT	OUTSOURCE (M, T, GH)	SEASONAL OPERATIONS	RELOCATION/ CLOSING OF FACILITIES	LEASE ARRANGEMENT			
Medium	2.1.5	Supplemental Operations Manual Requirements										
	3.0	**FLIGHT OPERATIONS**										
	3.1	**Air Carrier Programs and Procedures**										
Medium	3.1.1	Passenger Handling										
Medium	3.1.2	Flight Attendant Duties/Cabin Procedures										
High	3.1.3	Airman Duties/Flight Deck Procedures										
Medium	3.1.4	Operational Control										
Medium	3.1.5	Carry-On Baggage										
Medium	3.1.6	Exit Seating										
High	3.1.7	De-Icing Program										
High	3.1.8	Carriage of Cargo										
High	3.1.9	Aircraft Performance Operating Limitations										
Low	3.1.10	Lower Landing Minimums										
TBD	3.1.11	Computer Based Record Keeping										
TBD	3.1.12	HAZMAT / Dangerous Goods Program										
TBD	3.1.13	Other Personnel with Operational Control										
	3.2	**Operational Release**										
High	3.2.1	Dispatch or Flight Release										
High	3.2.2	Flight/Load Manifest/Weight and Balance Control										
High	3.2.3	MEL/CDL Procedures										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR OPERATIONAL RISKS

Environmental Criticality

CRITICALITY BASELINE	OPERATIONS ELEMENTS		AGE OF FLEET	VARIED FLEET MIX	COMPLEXITY OF AIRCRAFT	OUTSOURCE (M, T, GH)	SEASONAL OPERATIONS	RELOCATION/ CLOSING OF FACILITIES	LEASE ARRANGEMENT			
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**										
	4.2	**Training Program**										
High	4.2.3	Training of Flight Crewmembers										
High	4.2.4	Training of Flight Attendants										
High	4.2.5	Training of Dispatcher										
High	4.2.6	Training of Station Personnel										
High	4.2.7	Training of Check Airman and Instructors										
High	4.2.8	Simulators/Training Devices										
High	4.2.9	Outsource Crewmember Training										
TBD	4.2.10	Aircrew Designated Examiner										
TBD	4.2.11	Training of Flight Followers										
	4.3	**Crewmember and Dispatch Qualifications**										
Medium	4.3.1	Pilot Operating Limitations/Recent Experience										
Medium	4.3.2	Appropriate Airman/Crewmember Checks and Qualifications										
TBD	4.3.3	Advanced Qualification Program (AQP)										
	5.0	**ROUTE STRUCTURES**										
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**										
Medium	5.1.5	Station Facilities										
Low	5.1.6	Use of Approved Routes, Areas, & Airports										
TBD	5.1.7	Special Navigation Areas of Operation										
TBD	5.1.8	ETOPS										

AIR CARRIER ASSESSMENT TOOL - OPERATIONS

RISK INDICATORS FOR OPERATIONAL RISKS

Environmental Criticality

CRITICALITY BASELINE	OPERATIONS ELEMENTS		AGE OF FLEET	VARIED FLEET MIX	COMPLEXITY OF AIRCRAFT	OUTSOURCE (M, T, GH)	SEASONAL OPERATIONS	RELOCATION/ CLOSING OF FACILITIES	LEASE ARRANGEMENT			
TBD	5.1.9	RVSM Authorization										
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**										
	6.1	**Airman and Crewmember Limitations for Domestic, Flag, Supplemental, and Commercial**										
Medium	6.1.1	Scheduling/Reporting System										
Medium	6.1.2	Flight Crewmember Flight/Duty/Rest Time										
Medium	6.1.3	Flight Attendant Duty/Rest Time										
Medium	6.1.4	Dispatcher Duty/Rest Time										
	7.0	**TECHNICAL ADMINISTRATION**										
	7.1	**Key Personnel**										
Low	7.1.3	Director of Safety										
Low	7.1.4	Director of Operations										
Low	7.1.5	Chief Pilot										
	7.2	**Other Programs**										
TBD	7.2.1	Safety Program (Ground and Flight)										

OPERATIONS
AIR CARRIER ASSESSMENT TOOL RESULTS

Air Carrier: _____ **Assessment Year:** _____
Principal Operations Inspector: _____ **CHDO/CMO:** _____
Cabin Safety Inspector: _____ **Air Carrier Designator:** _____

OPERATIONS ELEMENTS	ASSESSMENT ACTUAL						PERCENTAGE	ASSESSMENT VALUE	CRITICALITY WEIGHT	WEIGHTED PERCENTAGE
	OS	**CD**	**PH**	**EC**	**Total**	**Total Possible**				
1.1.2 Appropriate Operational Equipment						**29**			**2**	
Aircraft Sub-System Weighted Percentage Average										
2.1.1 Currency						**29**			**2**	
2.1.2 Content Consistency Across Manuals						**29**			**2**	
2.1.3 Distribution						**29**			**2**	
2.1.4 Availability						**29**			**2**	
2.1.5 Supplemental Operations Manual Requirements						**29**			**2**	
Manual Management Sub-System Weighted Percentage Average										
3.1.1 Passenger Handling						**29**			**2**	
3.1.2 Flight Attendant Duties/Cabin Procedures						**29**			**2**	
3.1.3 Airman Duties/Flight Deck Procedures						**29**			**3**	
3.1.4 Operational Control						**29**			**2**	
3.1.5 Carry-On Baggage						**29**			**2**	
3.1.6 Exit Seating						**29**			**2**	
3.1.7 De-Icing Program						**29**			**3**	

OPERATIONS ELEMENTS		ASSESSMENT ACTUAL						PERCENTAGE	ASSESSMENT VALUE	CRITICALITY WEIGHT	WEIGHTED PERCENTAGE
		OS	**CD**	**PH**	**EC**	**Total**	**Total Possible**				
3.1.8	Carriage of Cargo						**29**			**3**	
3.1.9	Aircraft Performance Operating Limitations						**29**			**3**	
3.1.10	Lower Landing Minimums						**29**			**1**	
3.1.11	Computer Based Record Keeping						**29**			**TBD**	
3.1.12	HAZMAT / Dangerous Goods Program						**29**			**TBD**	
3.1.13	Other Personnel with Operational Control						**29**			**TBD**	
Air Carrier Programs and Procedures Sub-System Weighted Percentage Average											
3.2.1	Dispatch or Flight Release						**29**			**3**	
3.2.2	Flight/Load Manifest/Weight and Balance Control						**29**			**3**	
3.2.3	MEL/CDL Procedures						**29**			**3**	
Operational Release Sub-System Weighted Percentage Average											
4.2.3	Training of Flight Crewmembers						**29**			**3**	
4.2.4	Training of Flight Attendants						**29**			**3**	
4.2.5	Training of Dispatcher						**29**			**3**	
4.2.6	Training of Station Personnel						**29**			**3**	
4.2.7	Training of Check Airman and Instructors						**29**			**3**	
4.2.8	Simulators/Training Devices						**29**			**3**	
4.2.9	Outsource Crewmember Training						**29**			**3**	
4.2.10	Aircrew Designated Examiner						**29**			**TBD**	
4.2.11	Training of Flight Followers						**29**			**TBD**	
Training Program Sub-System Weighted Percentage Average											
4.3.1	Pilot Operating Limitations/Recent Experience						**29**			**2**	
4.3.2	Appropriate Airman/Crewmember Checks and Qualifications						**29**			**2**	
4.3.3	Advanced Qualification Program (AQP)						**29**			**TBD**	
Crewmember and Dispatch Qualifications Sub-System Weighted Percentage Average											

OPERATIONS ELEMENTS	ASSESSMENT ACTUAL						PERCENTAGE	ASSESSMENT VALUE	CRITICALITY WEIGHT	WEIGHTED PERCENTAGE
	OS	**CD**	**PH**	**EC**	**Total**	**Total Possible**				
5.1.5 Station Facilities						**29**			**2**	
5.1.6 Use of Approved Routes, Areas, & Airports						**29**			**1**	
5.1.7 Special Navigation Areas of Operation						**29**			**TBD**	
5.1.8 **ETOPS**						**29**			**TBD**	
5.1.9 **RVSM AUTHORIZATION**						**29**			**TBD**	
Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial Sub-System Weighted Percentage Average										
6.1.1 Scheduling/Reporting System						**29**			**2**	
6.1.2 Flight Crewmember Flight/Duty/Rest Time						**29**			**2**	
6.1.3 Flight Attendant Duty/Rest Time						**29**			**2**	
6.1.4 Dispatcher Duty/Rest Time						**29**			**2**	
Airman and Crewmember Limitations for Domestic, Flag, Supplemental, and Commercial Sub-System Weighted Percentage Average										
7.1.3 Director of Safety						**29**			**1**	
7.1.4 Director of Operations						**29**			**1**	
7.1.5 Chief Pilot						**29**			**1**	
Key Personnel Sub-System Weighted Percentage Average										
7.2.1 Safety Programs Ground and Flight						**29**			**TBD**	
Other Programs Sub-System Weighted Percentage Average										
TOTAL OPERATIONS RESULT										

Principal Operations Inspector: _____ **Date:** _____
Cabin Safety Inspector: _____ **Date:** _____

Notes/Justification: _____

Figure 2-3. Comprehensive Surveillance Plan (CSP) for Safety Attribute Inspections (SAI).

CSP-SAI

The CSP-SAI is an automated tool that PI and other CMT members use to plan and record surveillance requirements for a specific air carrier. Both Airworthiness and Operations specialties must complete the CSP-SAI. Therefore, the tool is divided into two sections: Airworthiness and Operations.

CSP-SAI DESCRIPTION

The CSP-SAI is simple, yet structured, and provides the flexibility for use by many different types of air carriers. It provides a template for the PI to determine, based on data and information analysis, knowledge, and experience, the most appropriate level of surveillance for each of their air carrier elements. The CSP-SAI development gives the PI the freedom and authority to increase surveillance in problem areas and reduce surveillance in proven areas.

It is the PI's responsibility to make appropriate decisions and determinations on the surveillance requirements. However, the CSP-SAI does provide information by element that the PI can use to determine the surveillance requirements for the air carrier. This information includes the element name, the criticality baseline associated with the element, and the SAI priority associated with the sub-system.

The CSP-SAI also provides space for the PI to record the information that will form the basis for each of the individual Inspector Work Plans. This section of the CSP-SAI includes space for the initial plan SAI, the current plan SAI, the completed SAI, the remaining SAI, SAI Team members and instructions, and a space for any notes.

CSP-SAI INSTRUCTIONS

The CSP-SAI will be used by PI and the CMT to document the results of their planning activities, both annually and as required by retargeting. The rows associated with the CSP-SAI document the air carrier system elements. The PI for Operations will identify and record the system-based surveillance requirements for the Operations elements and the PIs for Maintenance and Avionics will identify and record the system-based surveillance requirements for the Airworthiness elements.

Many of the columns presented on the CSP-SAI contain either standard information provided as guidance or information auto-filled from sources throughout the process.

The *SAI Priority* column is auto-filled from the Weighted Percentage column for each sub-system on the ACAT. The *SAI Priority* column prioritizes the sub-systems; the sub-system with the greatest level of concern will have an SAI Priority of 1 and the sub-system with the least level of concern will have an SAI Priority of 10 (for Airworthiness) or 8 (for Operations).

Considering the SAI Priority, the PI will determine which subsystems will be evaluated during the plan year. The PI will indicate which elements within the subsystem in the *Initial Plan SAIs* column. After the PI saves the CSP-SAI as "Final", the value entered into the *Initial Plan SAIs* column will AutoFill the *Current Plan SAIs* column which provides a status of current SAIs planned.

Once an SAI Inspection Record is completed, the *Completed SAIs* column in the CSP-SAI will automatically be updated to reflect that completion.

Once the *Completed SAIs* column has been filled, the *Remaining SAIs* column will be automatically computed by subtracting the *Completed SAIs* column from the *Current Plan SAIs* column. This process allows the PI to easily identify and follow the status of the SAI through completion of the CSP.

The PI enters information into the SAI Team column. Automation will provide the Plan ID, Sub-system ID/Name, and a listing of the CMT inspectors by specialty. The PI will first select a name from the list of inspectors, which will identify the SAI Team Coordinator (SAI TC). The PI will then select names from the list of inspectors identifying the additional SAI Team members. The PI will also enter any other specific instructions necessary for the SAI Team to complete the SAI inspection. Automation assigns a unique Record ID to each of the planned SAI and ensures that each inspector on the SAI Team has access to the records associated with that SAI.

The CSP-SAI also provides a Notes column where the PI can enter any general notes or comments related to the SAI inspection.

Retargeting results in a new version of the CSP-SAI. After review and/or adjustment of the ACAT, the PI may enter a new number in the *Current Plan SAIs* column to reflect the new number of SAI inspections to be completed for each element for the plan year. Automation updates the *Remaining SAIs* column based on the new *Current Plan SAIs* column.

If any SAI inspections are added as a result of retargeting, automation will assign a unique SAI Record ID to the inspection and the PI enters the applicable information in the *SAI Team* column. The *Initial Plan SAIs* column will never change from the initial number entered for the plan year. Therefore, the PI has the capability to track what was planned initially and any changes made due to retargeting.

The detailed descriptions and instructions for completing the CSP-SAI are presented on the following pages:

CSP-SAI

ITEM	DESCRIPTION/INSTRUCTIONS
CRITICALITY BASELINE	This column identifies the level of criticality that has been defined as the standard for each element. It will be categorized as High, Medium, or Low. 0 High = A high likelihood that a failure in this element could lead to an unsafe condition. 1 Medium = A moderate likelihood that a failure in this element could lead to an unsafe condition. 2 Low = A low likelihood that a failure in this element could lead to an unsafe condition.
ELEMENTS	This column identifies the Operations or Airworthiness elements of the air carrier systems and sub-systems.
SAI PRIORITY	This column identifies a priority for each sub-system determined from the WEIGHTED PERCENTAGE column on the ACAT. This SAI PRIORITY prioritizes the fourteen sub-systems: the sub-system with the greatest level of concern will have an SAI Priority of 1 and the sub-system with the least level of concern will have an SAI Priority of 10 (for Airworthiness) or 8 (for Operations).
INITIAL PLAN SAIS	The PI enters the number of SAIs initially planned to be completed for each element for the plan year.
CURRENT PLAN SAIS	This column identifies the current number of SAIs to be completed for each element for the plan year. The PI enters any changes made in the number of SAIs, due to retargeting, in this column.
COMPLETED SAIS	This column identifies the number of SAIs that have been completed for each element for the plan year.
REMAINING SAIS	This column identifies the number of SAI inspections left to be completed for each element for the plan year.
SAI TEAM	From a drop-down listing of CMT inspectors by specialty, the PI will first select an inspector for the SAI TC role. The PI will then select the additional SAI Team inspectors. The PI will also enter any other specific instructions necessary.

NOTES	The PI may enter any additional comments in this column.

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
	1.0	**AIRCRAFT CONFIGURATION CONTROL**							
	1.1	**Aircraft**							
High	1.1.1	Aircraft Airworthiness Requirements							
Medium	1.1.2	Appropriate Operational Equipment							
TBD	1.1.3	Special Flight Permits							
	1.2	**Records and Reporting Systems**							
High	1.2.1	Airworthiness Release or Log Book Entry							
Medium	1.2.2	Major Repairs and Alterations							
High	1.2.3	Maintenance Log/Recording Requirements							
Low	1.2.4	MIS Reports							

* High *A high likelihood that a failure in this element could lead to an unsafe condition.*
Medium *A moderate likelihood that a failure in this element could lead to an unsafe condition.*
Low *A low likelihood that a failure in this element could lead to an unsafe condition.*

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)

AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
Low	1.2.5	Mechanical Reliability Reports (MRR)							
Low	1.2.6	Aircraft Listing							
	1.3	**Maintenance Organization**							
High	1.3.1	Maintenance Program							
High	1.3.2	Inspection Program							
High	1.3.3	Maintenance Facilities/Main Maintenance Base							
High	1.3.4	RII							
High	1.3.5	MEL/CDL/Deferred Maintenance							
High	1.3.6	AD Management							
High	1.3.7	Outsource Organization							
High	1.3.8	Control of Calibrated Tools and Test Equipment							
High	1.3.9	Engineering/Major Repairs and Alterations							
High	1.3.10	Parts/Material Control/SUP							
High	1.3.11	Continuous Analysis and Surveillance (CAS)							
High	1.3.12	SFAR36							

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
High	1.3.13	DAS							
Low	1.3.14	GMM/Equivalent							
Medium	1.3.15	Reliability Program							
Medium	1.3.16	Fueling							
High	1.3.17	Weight and Balance Program							
High	1.3.18	De-Icing Program							
Low	1.3.19	Lower Landing Minimums							
TBD	1.3.20	Engine Condition Monitoring							
TBD	1.3.21	Parts Pooling							
TBD	1.3.22	Parts Borrowing							
TBD	1.3.23	Short-term Escalations							
TBD	1.3.24	CASE							
	2.0	**MANUALS**							
	2.1	**Manual Management**							
Medium	2.1.1	Currency							
Medium	2.1.2	Content Consistency Across Manuals							

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)

AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
Medium	2.1.3	Distribution							
Medium	2.1.4	Availability							
Medium	2.1.5	Supplemental Operations Manual Requirements							
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**							
	4.1	**Maintenance Personnel Qualifications**							
High	4.1.1	RII Personnel							
Medium	4.1.2	Maintenance Certificate Requirements							
	4.2	**Training Program**							
High	4.2.1	Maintenance Training Program							
High	4.2.2	RII Training Requirements							
Low	4.2.8	Simulators/Training Devices							
	4.4	**Mechanics and Repairmen Certification**							
Low	4.4.1	Recency of Experience							
Low	4.4.2	Display of Certificate							

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
Low	4.4.3	Privileges - Airframe and Powerplant							
Low	4.4.4	Privileges and Limitations for Repairmen							
	5.0	**ROUTE STRUCTURES**							
	5.1	**Approved Routes and Areas**							
Medium	5.1.1	Line Stations (Servicing and Maintenance)							
Medium	5.1.2	Weather Reporting / SWARS							
Medium	5.1.3	Non-Federal NAVAIDs							
Low	5.1.4	Altimeter Setting Sources							
TBD	5.1.8	ETOPS							
TBD	5.1.9	RVSM Authorization							
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**							
	6.2	**Maintenance Personnel**							
Low	6.2.1	Maintenance Duty Time							
	7.0	**TECHNICAL ADMINISTRATION**							

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
	7.1	**Key Personnel**							
Low	7.1.1	Director of Maintenance							
Low	7.1.2	Chief Inspector							
Low	7.1.3	Director of Safety							
Low	7.1.6	Maintenance Control							

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
	1.0	**AIRCRAFT CONFIGURATION CONTROL**							
	1.1	**Aircraft**							
Medium	1.1.2	Appropriate Operational Equipment							
	2.0	**MANUALS**							
	2.1	**Manual Management**							
Medium	2.1.1	Currency							
Medium	2.1.2	Content Consistency Across Manuals							
Medium	2.1.3	Distribution							
Medium	2.1.4	Availability							

* High *A high likelihood that a failure in this element could lead to an unsafe condition.*
Medium *A moderate likelihood that a failure in this element could lead to an unsafe condition.*
Low *A low likelihood that a failure in this element could lead to an unsafe condition.*

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
Medium	2.1.5	Supplemental Operations Manual Requirements							
	3.0	**FLIGHT OPERATIONS**							
	3.1	**Air Carrier Programs and Procedures**							
Medium	3.1.1	Passenger Handling							
Medium	3.1.2	Flight Attendant Duties/Cabin Procedures							
High	3.1.3	Airman Duties/Flight Deck Procedures							
Medium	3.1.4	Operational Control							
Medium	3.1.5	Carry On Baggage							
Medium	3.1.6	Exit Seating							
High	3.1.7	De-Icing Program							
High	3.1.8	Carriage of Cargo							
High	3.1.9	Aircraft Performance Operating Limitations							
Low	3.1.10	Lower Landing Minimums							
TDB	3.1.11	Computer Based Record Keeping							

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
TBD	3.1.12	HAZMAT / Dangerous Goods Program							
TBD	3.1.13	Other Personnel with Operational Control							
	3.2	**Operational Release**							
High	3.2.1	Dispatch or Flight Release							
High	3.2.2	Flight/Load Manifest/Weight and Balance Control							
High	3.2.3	MEL/CDL Procedures							
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**							
	4.2	**Training Programs**							
High	4.2.3	Training of Flight Crewmembers							
High	4.2.4	Training of Flight Attendants							
High	4.2.5	Training of Dispatcher							
High	4.2.6	Training of Station Personnel							
High	4.2.7	Training of Check Airman and Instructors							
High	4.2.8	Simulators/Training Devices							

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
High	4.2.9	Outsource Crewmember Training							
High	4.2.10	Aircrew Designated Examiner							
TBD	4.2.11	Training of Flight Followers							
	4.3	**Crewmember and Dispatch Qualifications**							
Medium	4.3.1	Pilot Operating Limitations/Recent Experience							
Medium	4.3.2	Appropriate Airman/Crewmember Checks and Qualifications							
TBD	4.3.3	Advanced Qualification Program (AQP)							
	5.0	**ROUTE STRUCTURES**							
	5.1	**Approved Routes and Areas**							
Medium	5.1.5	Station Facilities							
Low	5.1.6	Use of Approved Routes, Areas and Airports							
TBD	5.1.7	Special Navigation Areas of Operation							

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
TBD	5.1.8	ETOPS							
TBD	5.1.9	RVSM Authorization							
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**							
	6.1	**Airman and Crewmember Limitations for Domestic, Flag, Supplemental, and Commercial**							
Medium	6.1.1	Scheduling/Reporting System							
Medium	6.1.2	Flight Crewmember Flight/Duty/Rest Time							
Medium	6.1.3	Flight Attendant Duty/Rest Time							
Medium	6.1.4	Dispatcher Duty/Rest Time							
	7.0	**TECHNICAL ADMINISTRATION**							
	7.1	**Key Personnel**							
Low	7.1.3	Director of Safety							
Low	7.1.4	Director of Operations							
Low	7.1.5	Chief Pilot							

COMPREHENSIVE SURVEILLANCE PLAN - SAFETY ATTRIBUTE INSPECTION (SAI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS	SAI Priority	Initial Plan SAIs	Current Plan SAIs	Completed SAIs	Remaining SAIs	SAI Team	Notes
	7.2 Other Programs							
TBD	7.2.1 Safety Program (Ground and Flight)							

FIGURE 2-4. Comprehensive Surveillance Plan (CSP) for Element Performance Inspections (EPI).

The CSP-EPI is an automated tool that PI and other CMT members use to plan and record surveillance requirements for a specific air carrier. Both Airworthiness and Operations specialties must complete the CSP-EPI. Therefore, the tool is divided into two sections: Airworthiness and Operations.

The CSP-EPI is simple, yet structured, and provides the flexibility for use by many different types of air carriers. It provides a template for the PI to determine, based on data and information analysis, knowledge, and experience, the most appropriate level of surveillance for each of their air carrier elements. The CSP-EPI development gives the PI the freedom and authority to increase surveillance in problem areas and reduce surveillance in proven areas.

It is the PI's responsibility to make appropriate decisions and determinations on the surveillance requirements. However, the CSP-EPI does provide information by element that the PI can use to determine the surveillance requirements for the air carrier. This information includes the element name, the criticality baseline associated with the element, the EPI frequency baseline associated with the element, and the assessment value resulting from the air carrier assessment process.

The CSP-EPI also provides space for the PI to record the information that will form the basis for each of the individual Inspector Work Plans. This section of the CSP-EPI includes space for the PI to annotate the EPI minimum frequency associated with the element, the initial plan EPI, the current plan EPI, the completed EPI, the remaining EPI, the Inspector ID and information, and a space for any notes.

CSP-EPI INSTRUCTIONS

The CSP-EPI will be used by PI and the CMT to document the results of their planning activities, both annually and as required by retargeting. The rows associated with the CSP-EPI document the air carrier system elements. The PI for Operations will identify and record the system-based surveillance requirements for the Operations elements and the PI for Maintenance and Avionics will identify and record the system-based surveillance requirements for the Airworthiness elements.

The PI should first complete the informational section of the CSP-EPI that includes the Air Carrier name and the Air Carrier Designator.

Many of the columns presented on the CSP-EPI are either standard information provided as guidance or information auto-filled from sources throughout the process. Finalization of the Air Carrier Assessment Tool is required prior to the development of the CSP-EPI.

The CSP-EPI Assessment Value column is auto-filled using the results of the ACAT. Once the Assessment Value column has been filled, the *EPI Minimum Frequency* column is automatically determined from the *EPI Baseline Frequency* column and the *Assessment Value* column. Automation ensures that the *EPI Minimum Frequency* column is not less than "A" (annually).

Based on the ACAT results, as well as expertise and personal knowledge of the air carrier, the PI will enter the number of EPI inspections to be completed for each element for the plan year in the *Initial Plan EPIs* column. The number of Initial Plan EPIs must at least meet the *EPI Minimum Frequency*. This gives the PI the ability and authority to increase surveillance in problem areas. After the PI saves the CSP-EPI as "Final", the value entered into the *Initial Plan EPIs* column will auto-fill the *Current Plan EPIs* column, which provides a status of current EPI planned.

Once an EPI Record is completed, the *Completed EPIs* column in the CSP-EPI will automatically be updated to reflect that completion.

Once the *Completed EPIs* column has been filled, the *Remaining EPIs* column will be automatically computed by subtracting the *Completed EPIs* column from the *Current Plan EPIs* column. This process allows the PI to easily identify and follow the status of the EPI through completion of the CSP.

The PI will also need to enter information into the *Inspector ID* column. Automation will provide the Plan ID, Element ID/Name, and a listing of the CMT inspectors by specialty. The PI will select a name from the list of inspectors for each EPI inspection planned. The PI will also enter a location, if desired, for the EPI inspection and any other specific instructions necessary for the inspector to properly complete the EPI inspection. Automation assigns a unique Record ID to each of the planned EPI and ensures that the inspector has access to the reports associated with that EPI record.

The CSP-EPI also provides a *Notes* column where the PI can enter any general notes or comments related to the EPI inspection.

Retargeting results in a new version of the CSP-EPI. After review and/or adjustment of the SSAT and ACAT, the PI may enter a new number in the *Current Plan EPIs* column to reflect the new number of EPI inspections to be completed for each element for the plan year. Automation updates the *Remaining EPIs* column based on the new *Current Plan EPIs* column.

If any EPI inspections are added as a result of retargeting, automation will assign a unique EPI Record ID to the inspection and the PI will need to enter the applicable information in the *Inspector ID* column.

The *Initial Plan EPIs* column will never change from the initial number entered for the plan year. Therefore, the PI has the capability to track what was planned initially and any changes made due to retargeting.

The detailed descriptions and instructions for completing the CSP-EPI are presented on the following pages:

CSP-EPI

Item	DESCRIPTION/INSTRUCTIONS
CRITICALITY BASELINE	This column identifies the level of criticality that has been defined as the standard for each element. It will be categorized as High, Medium, or Low. • High = A high likelihood that a failure in this element could lead to an unsafe condition. • Medium = A moderate likelihood that a failure in this element could lead to an unsafe condition. • Low = A low likelihood that a failure in this element could lead to an unsafe condition.
ELEMENTS	This column identifies the Operations or Airworthiness elements of the air carrier systems and sub-systems.
EPI FREQUENCY BASELINE	This column identifies the frequency that has been defined as the standard for each element. It will be categorized as Q, S, or A. • Q = Quarterly surveillance of the element within the defined planning cycle. • S = Semi-annual surveillance of the element within the defined planning cycle. • A = Annual surveillance of the element within the defined planning cycle.

CSP-EPI

Item	DESCRIPTION/INSTRUCTIONS
ASSESSMENT VALUE	This column identifies the ASSESSMENT VALUE determined through the use of the Air Carrier Assessment Tool. This ASSESSMENT VALUE is applied to the EPI Frequency Baseline to determine the EPI Minimum Frequency for an element. The Assessment Values are: • -1 = Leads to a reduction in the inspection frequency for the surveillance element. • 0 = Leads to no change in the inspection frequency for the surveillance element. • +1 = Leads to a one-level increase in the inspection frequency for the surveillance element. • +2 = Leads to a two-level increase in the inspection frequency for the surveillance element.
EPI MINIMUM FREQUENCY	This column identifies an EPI MINIMUM FREQUENCY that is computed by applying Assessment Value to the EPI FREQUENCY BASELINE. This indicates the minimum frequency with which the element will be inspected within the defined planning cycle. It will be categorized as H, Q, S, or A. • H = Heightened surveillance of the element, within the defined planning cycle, to a frequency greater than quarterly as determined by the Principal Inspector. A thorough system assessment, such as an SAI, should be considered for this element. • Q = Quarterly surveillance of the element within the defined planning cycle. • S = Semi-Annual surveillance of the element within the defined planning cycle. • A = Annual surveillance of the element within the defined planning cycle.
INITIAL PLAN EPIS	The PI enters the number of EPI inspections initially planned to be completed for each element for the plan year.
CURRENT PLAN EPIS	This column identified the current number of EPI inspections to be completed for each element for the plan year. The PI enters any changes made in the number of EPI inspections due to retargeting in this column.

CSP-EPI

Item	DESCRIPTION/INSTRUCTIONS
COMPLETED EPIS	This column identifies the number of EPI inspections that have been completed for each element for the plan year.
REMAINING EPIS	This column identifies the number of EPI inspections left to be completed for each element for the plan year.
INSPECTOR ID	From a drop-down listing of CMT inspectors by specialty, the PI will choose an inspector for each EPI. The PI may enter a location for the EPI and any other specific instructions necessary for the inspector to complete the EPI inspection.
NOTES	The PI may enter any additional comments in this column.

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
	1.0	**AIRCRAFT CONFIGURATION CONTROL**									
	1.1	**Aircraft**									
High	1.1.1	Aircraft Airworthiness Requirements	Q								
Medium	1.1.2	Appropriate Operational Equipment	S								
TBD	1.1.3	Special Flight Permits	TBD								
	1.2	**Records and Reporting Systems**									
High	1.2.1	Airworthiness Release or Log Book Entry	Q								
Medium	1.2.2	Major Repairs and Alterations	S								
High	1.2.3	Maintenance Log/Recording Requirements	Q								
Low	1.2.4	MIS Reports	A								
Low	1.2.5	Mechanical Reliability Reports (MRR)	A								
Low	1.2.6	Aircraft Listing	A								

* High *A high likelihood that a failure in this element could lead to an unsafe condition.*
Medium *A moderate likelihood that a failure in this element could lead to an unsafe condition.*
Low *A low likelihood that a failure in this element could lead to an unsafe condition.*

** Q = Quarterly
S = Semi-Annually
A = Annually

*** Q = Quarterly
S = Semi-Annually
A = Annually
H = Heightened

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS	EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
	1.3 Maintenance Organization									
High	1.3.1 Maintenance Program	Q								
High	1.3.2 Inspection Program	Q								
High	1.3.3 Maintenance Facilities/Main Maintenance Base	Q								
High	1.3.4 RII	Q								
High	1.3.5 MEL/CDL/Deferred Maintenance	Q								
High	1.3.6 AD Management	Q								
High	1.3.7 Outsource Organization	Q								
High	1.3.8 Control of Calibrated Tools and Test Equipment	Q								
High	1.3.9 Engineering/Major Repairs and Alterations	Q								
High	1.3.10 Parts/Material Control/SUP	Q								
High	1.3.11 Continuous Analysis and Surveillance (CAS)	Q								
High	1.3.12 SFAR36	Q								
High	1.3.13 DAS	Q								
Low	1.3.14 GMM/Equivalent	A								
Medium	1.3.15 Reliability Program	S								
Medium	1.3.16 Fueling	S								

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
High	1.3.17	Weight and Balance Program	Q								
High	1.3.18	De-Icing Program	Q								
Low	1.3.19	Lower Landing Minimums	A								
TBD	1.3.20	Engine Conditioning Monitoring	TBD								
TBD	1.3.21	Parts Pooling	TBD								
TBD	1.3.22	Parts Borrowing	TBD								
TBD	1.3.23	Short-term Escalations	TBD								
TBD	1.3.24	CASE	TBD								
	2.0	**MANUALS**									
	2.1	**Manual Management**									
Medium	2.1.1	Currency	S								
Medium	2.1.2	Content Consistency Across Manuals	S								
Medium	2.1.3	Distribution	S								
Medium	2.1.4	Availability	S								
Medium	2.1.5	Supplemental Operations Manual Requirements	S								
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**									
	4.1	**Maintenance Personnel Qualifications**									

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
High	4.1.1	RII Personnel	Q								
Medium	4.1.2	Maintenance Certificate Requirements	S								
	4.2	**Training Program**									
High	4.2.1	Maintenance Training Program	Q								
High	4.2.2	RII Training Requirements	Q								
Low	4.2.8	Simulators/Training Devices	A								
	4.4	**Mechanics and Repairmen Certification**									
Low	4.4.1	Recency of Experience	A								
Low	4.4.2	Display of Certificate	A								
Low	4.4.3	Privileges - Airframe and Powerplant	A								
Low	4.4.4	Privileges and Limitations for Repairmen	A								
	5.0	**ROUTE STRUCTURES**									
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**									
Medium	5.1.1	Line Stations (Servicing and Maintenance)	S								
Medium	5.1.2	Weather Reporting Facilities/ SWARS Stations	S								
Medium	5.1.3	Non-Federal NAVAIDs	S								

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
AIRWORTHINESS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
Low	5.1.4	Altimeter Setting Sources	A								
TBD	5.1.8	ETOPS	TBD								
TBD	5.1.9	RVSM Authorization	TBD								
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**									
	6.2	**Maintenance Personnel**									
Low	6.2.1	Duty Time	A								
	7.0	**TECHNICAL ADMINISTRATION**									
	7.1	**Key Personnel**									
Low	7.1.1	Director of Maintenance	A								
Low	7.1.2	Chief Inspector	A								
Low	7.1.3	Director of Safety	A								
Low	7.1.6	Maintenance Control	A								

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
	1.0	**AIRCRAFT CONFIGURATION CONTROL**									
	1.1	**Aircraft**									
Medium	1.1.2	Appropriate Operational Equipment	S								
	2.0	**MANUALS**									
	2.1	**Manual Management**									
Medium	2.1.1	Currency	S								
Medium	2.1.2	Content Consistency Across Manuals	S								
Medium	2.1.3	Distribution	S								
Medium	2.1.4	Availability	S								
Medium	2.1.5	Supplemental Operations Manual Requirements	S								

* High *A high likelihood that a failure in this element could lead to an unsafe condition.*
Medium *A moderate likelihood that a failure in this element could lead to an unsafe condition.*
Low *A low likelihood that a failure in this element could lead to an unsafe condition.*

** Q = Quarterly
S = Semi-Annually
A = Annually

*** Q = Quarterly
S = Semi-Annually
A = Annually
H = Heightened

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
	3.0	**FLIGHT OPERATIONS**									
	3.1	**Air Carrier Programs and Procedures**									
Medium	3.1.1	Passenger Handling	Q								
Medium	3.1.2	Flight Attendant Duties/Cabin Procedures	S								
High	3.1.3	Airman Duties/Flight Deck Procedures	S								
Medium	3.1.4	Operational Control	S								
Medium	3.1.5	Carry On Baggage	S								
Medium	3.1.6	Exit Seating	S								
High	3.1.7	De-Icing Program	Q								
High	3.1.8	Carriage of Cargo	Q								
High	3.1.9	Aircraft Performance Operating Limitations	Q								
Low	3.1.10	Lower Landing Minimums	A								

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
TBD	3.1.11	Computer Based Record Keeping	TBD								
TBD	3.1.12	HAZMAT / Dangerous Goods Program	TBD								
TBD	3.1.13	Other Personnel with Operational Control	TBD								
	3.2	**Operational Release**									
High	3.2.1	Dispatch or Flight Release	Q								
High	3.2.2	Flight/Load Manifest/Weight and Balance Control	Q								
High	3.2.3	MEL/CDL Procedures	Q								
	4.0	**PERSONNEL TRAINING AND QUALIFICATIONS**									
	4.2	**Training Program**									
High	4.2.3	Training of Flight Crewmembers	Q								
High	4.2.4	Training of Flight Attendants	Q								
High	4.2.5	Training of Dispatcher	Q								
High	4.2.6	Training of Station Personnel	Q								

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
High	4.2.7	Training of Check Airman and Instructors	Q								
High	4.2.8	Simulators/Training Devices	Q								
High	4.2.9	Outsource Crewmember Training	Q								
High	4.2.10	Aircrew Designated Examiner	Q								
TBD	4.2.11	Training of Flight Followers	TBD								
	4.3	**Crewmember and Dispatch Qualifications**									
Medium	4.3.1	Pilot Operating Limitations/Recent Experience	S								
Medium	4.3.2	Appropriate Airman/Crewmember Checks and Qualifications	S								
TBD	4.3.3	Advanced Qualification Program	TBD								
	5.0	**ROUTE STRUCTURES**									
	5.1	**Approved Routes/Areas for Domestic, Flag, Supplemental, and Commercial**									

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
Medium	5.1.5	Station Facilities	S								
Low	5.1.6	Use of Approved Routes, Areas and Airports	A								
TBD	5.1.7	Special Navigation Areas of Operation	TBD								
TBD	5.1.8	ETOPS	TBD								
TBD	5.1.9	RVSM Authorization	TBD								
	6.0	**AIRMAN AND CREWMEMBER FLIGHT, REST, AND DUTY TIME**									
	6.1	**Airman and Crewmember Limitations for Domestic, Flag, Supplemental, and Commercial**									
Medium	6.1.1	Scheduling/Reporting System	S								
Medium	6.1.2	Flight Crewmember Flight/Duty/Rest Time	S								
Medium	6.1.3	Flight Attendant Duty/Rest Time	S								
Medium	6.1.4	Dispatcher Duty/Rest Time	S								
	7.0	**TECHNICAL ADMINISTRATION**									
	7.1	**Key Personnel**									
Low	7.1.3	Director of Safety	A								

COMPREHENSIVE SURVEILLANCE PLAN - ELEMENT PERFORMANCE INSPECTION (EPI)
OPERATIONS

Air Carrier _____ Air Carrier Designator _____

Criticality Baseline*	ELEMENTS		EPI Frequency Baseline**	Assessment Value	EPI Minimum Frequency	Initial Plan EPIs	Current Plan EPIs	Completed EPIs	Remaining EPIs	Inspector ID	Notes
Low	7.1.4	Director of Operations	A								
Low	7.1.5	Chief Pilot	A								
	7.2	**Other Programs**									
TBD	7.2.1	Safety Program (Ground and Flight)	TBD								

Figure 3-1. Sample Cover Memo for Inspector Work Plan Submittal.

U.S. Department
of Transportation

**Federal Aviation
Administration**

Memorandum

Subject: ACTION: [Carrier ID] CMT Inspector Work Plan Date:

From: [Principal Inspector] Reply to
Attn. of:

To: Manager, [FSDO ID] FSDO

The attached Inspector Work Plan for FY01 is submitted for [Inspector Name].

If the resources are available and adequate to support the Inspector Work Plan, please indicate your concurrence by signing below and returning by fax to [Fax Number], attention [Principal Inspector]. Forward the Inspector Work Plan to the inspector as assigned.

If the resources are not available and adequate to support the Inspector Work Plan, please indicate your non-concurrence by signing below and returning by fax to [Fax Number], attention [Principal Inspector]. In accordance with ATOS procedures, you must also send a memo to the Manager, to [CHDO/CMO ID], with a copy to your Flight Standards Division Manager, documenting your reasons for non-concurrence. The Manager, [CHDO/CMO ID], will then contact you to discuss the memo and attempt to resolve the resource issue.

Concurrence: _____ Non-Concurrence: _____

Signature *Title* *Signature* *Title*

Date: Date:

Attachment

Figure 4-1. Inspection of ATOS Air Carriers by Non-ATOS Aviation Safety Inspectors.

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subject: ACTION: Inspection of ATOS Air Carriers by Non-ATOS Aviation Safety Inspectors

Date: April 6, 2001

From: Director, Flight Standards Service, AFS-1

To: All Flight Standards Division/Staff Managers

Since October 1, 1998, the surveillance program for the ten major air carriers including Alaska, American, America West, Continental, Delta, Northwest, Southwest, Trans World Airways, United, and US Airways has been conducted under the ATOS surveillance process. FAA Order 8400.10, Appendix 6, specified that the only surveillance conducted on these ten carriers should be inspections identified in the ATOS surveillance plan and performed by the assigned Certificate Management Team (CMT) member and en route inspections conducted by any inspector.

Based on input from ATOS Phase 1 certificate management offices and recommendations stemming from the ATOS special project, pending the issuance of amended handbook guidance, I am expanding the types of inspections of ATOS air carriers that may be conducted.

Aviation safety inspectors who are not assigned to an ATOS CMT are hereby authorized to conduct the following types of additional unplanned inspections, recorded in PTRS:

Station facility
De-ice checks
Ramp checks
Trip records
Cargo checks
Spot checks
Unapproved parts
Fuel facility
Contract maintenance
Support facility
Structural spot checks
Weather reporting/altimeter setting source checks

ATOS-assigned inspectors are not authorized to conduct these PTRS inspection activities. ATOS inspectors will continue to conduct Safety Attribute Inspections (SAI) and Element Performance Inspections (EPI) as assigned in the Comprehensive Surveillance Plan.

The development of PTRS-based planned work programs (i.e., "P" items) for ATOS carriers is prohibited. The additional inspections listed above shall be limited to cases where inspection opportunities arise while conducting other work activities at a particular location. For example, if a non-ATOS inspector is inspecting ground deicing operations at a particular airport, the opportunity to inspect and report on an ATOS carrier's

deicing operations is now authorized. Another example would be if a non-ATOS inspector noticed maintenance being performed on an ATOS carrier, the opportunity to conduct a spot check is now authorized.

Airline strike, labor unrest, and financial stress surveillance by non-ATOS inspectors may be authorized under a surveillance plan developed with the concurrence of the certificate-holding district office, region, and the Flight Standards Certification and Surveillance Division (AFS-900) (see HBAT 00-17).

The current policy of allowing non-ATOS inspectors to conduct cockpit and cabin en route inspections remains unchanged. Inspections other than those listed in this memorandum continue to be prohibited; however, this prohibition does not preclude investigating any area that is identified as a possible violation or a failure to follow the operator's procedures.

Non-ATOS inspectors should refrain from communicating directly with carrier personnel about any perceived inadequacy in the carrier's approved systems or procedures (these should be communicated to the principal inspector). In cases where potential regulatory violations are discovered, it is essential that the coordination requirements of FAA Order 2150.3A, paragraph 208, be explicitly followed with regard to the interface between the geographic and certificate-holding district offices. In keeping with ATOS policy and procedures, significant issues or items of immediate concern, as determined by the inspector, arising from inspections shall be verbally conveyed to the principal inspector in a timely manner. Any imminent safety concern that requires immediate intervention must be addressed immediately with the appropriate company personnel.

Please distribute this memorandum throughout your division/staff. Also, please ensure that your CMOs promptly notify their assigned ATOS carriers of this new policy and provide them with a copy of this memorandum.

Original Signed By:
L. Nicholas Lacey

Figure 4-2. ATOS Surveillance Implementation Guidelines.

- **ATOS is not a Program Tracking and Reporting System (PTRS).**
  - The ATOS Inspector Work Plan replaces the work plans generated under the National Program Guidelines; it is not a substitute for PTRS.
  - We can't think in terms of PTRS and use ATOS for work or time accountability.
  - Everyone still feels like they have to enter something to show they were working.
  - Some inspectors are doing PTRS-type activities disguised as ATOS.
  - ATOS is a system – if you dismantle ATOS and pull this piece out and that piece out, you no longer have a system.

- **Planning is a critical element in ATOS.**
  - Do not do the work activities first and then figure out how to plug it into the system. That is NOT a system safety approach.
  - Planning for ATOS surveillance implementation starts with the Principal Inspectors who should include instructions to provide guidance on the type, location, and timing of inspection activities.
  - The PI may give instructions for the completion of an SAI or EPI by a specific date or the PI may request that the activities take place at certain locations or involve certain makes/models.
  - The CSP provides the CMT with a plan that is tailored to the surveillance requirements for their air carrier.
  - The PI can help to ensure the CMT receives surveillance results in a timely manner by using the instructions feature in the CSP to prioritize inspections and set reasonable timelines for completion.

- **The first step is to review the Inspector Work Plan.**
  - The inspector reviews the Inspector Work Plan and coordinates the inspection activities with his or her schedule.
  - Geographic inspectors have an additional responsibility to coordinate and communicate their activities in completion of the Inspector Work Plan with both their supervisor and the CMT Principal.

- **The next step is preparation for the assigned inspection.**
  - It was not envisioned that inspections would be conducted without this preparation, which is extensive for the first such inspection conducted by the inspector.
  - Preparation starts with a thorough review of the applicable data collection tool.
  - The ATOS data collection tools list all pertinent regulations, policy, and advisory documents that pertain to the inspection.
  - This allows the inspector to research and refresh his/her knowledge appropriately and to actually plan and prepare for an inspection.
  - The inspector applies his/her planning and judgment to select the numbers and locations of inspection activities to perform to be able to answer all of the questions in a thorough and quality manner.

- **General Guidance for Planning Inspection Activities.**
  - The key question to ask in determining how many activities to plan is: "Are the events likely to vary over time and place?"
  - The next thing to do is review the specific data collection tool and think about the purpose of that element.
    - For an SAI, you need to determine how you can find out how that function or process is performed.
    - On an EPI, you need to determine how you can tell if the function or process is being performed correctly.
    - You should be thinking about events that are directly observable and will give you an idea of what the process is or how the process works.
  - Each activity should consist of stand-alone and observable events.
  - Most element performance inspection activities will lead to observing the aircraft or flight operations if all aspects of the element are fully examined.
  - Surveillance is making observations and recording those observations at the most basic level.

- **It is not appropriate to combine SAI and EPI.**
  - SAI and EPI inspection activities have different purposes.
    - The SAI is looking to see if there is a system in place and does that system incorporate the safety attributes.
    - The EPI is validating the performance of the system – Is the operator following their system procedures? And is that system accomplishing the desired result of safety and regulatory compliance?
  - Simultaneously doing an SAI and EPI is not appropriate.
  - There is no need to have the same person doing both the SAI and EPI for an element. In fact, this may not be the most beneficial because an independent look may provide better information.

- **The Data Collection Tools are not checklists.**
  - Each data collection tool lists a series of questions for the inspector or team of inspectors to answer.
  - The numbered questions in all data collection tools require either yes or no responses and, in some cases, not applicable (N/A).
  - The inspector plans individual activities that will help the inspector answer the questions.

- **It generally takes <u>multiple</u> activities to complete an inspection.**
  - Responses are entered only for those questions that can be answered from the single activity being reported.
  - It does not matter how many questions are answered during each activity, as long as all the questions are answered by the time the report is saved as final.

- **Data collection tools are completed based on surveillance activities.**
  - The data collection tools are not designed to be a series of questions to ask the air carrier's personnel.
  - It is inappropriate to give the air carrier a copy of the data collection tool and ask them to "fill it out."

— The inspector should ask his or her own questions to find out about the policies and procedures of the air carrier.
— You do not ask a person, "Are you responsible?" Rather, you ask questions, make observations, and perform other tests to find out enough about how the carrier performs that process to determine for yourself who is responsible.

- **The data collection tool questions must not be re-written by CMT or inspectors**.
  — This will corrupt the data entered into the ATOS repository and invalidate the system.

- **Performing Assigned Safety Attribute Inspections (SAI).**
  — SAI are completed by a team of inspectors to evaluate a subsystem or a portion of a subsystem.
  — Each team member is responsible for completing certain elements within a system, or a particular attribute section, or possibly certain questions within an attribute section. This allows the distribution of inspection activity among the SAI team to obtain accurate data in a timely manner.
  — After performing their inspection activities, each SAI team member is responsible for reporting their own responses into ATOS automation.
  — Although communication between team members is essential, there is no need to share answers between team members for the purpose of having each team member answer every question. In fact, this is an undesirable action resulting in duplication.
  — SAI Team Coordinators (TC) play an important role in organizing and coordinating SAI team activities.
  — The SAI TC, in conjunction with the remaining SAI team members, divides and distributes the SAI activities.
  — The TC is responsible for ensuring that activities, such as personnel interviews, are not repetitive or redundant, and that all activities are completed to accurately answer the questions on the SAI.
  — The TC is a leadership role that should be assigned to an experienced inspector, with a solid knowledge of the air carrier, who is based near the location where most SAI activities will take place.
  — The Team Coordinator is not a supervisor and is not responsible for team member performance.
  — If the TC encounters difficulties with a team member during an inspection, the situation should be elevated through the PI to that team member's supervisor for resolution.

- **Performing Assigned Element Performance Inspections (EPI).**
  — The inspector will independently determine the number of inspection activities that will be accomplished to complete an inspection.
  — Generally it takes at least 5-10 surveillance activities to answer all the EPI questions.
  — Once an EPI is opened, it should be completed and saved as final within 30 to 60 days. This will provide a continuous flow of information for determining whether retargeting is necessary.
  — The ASI will accomplish EPI in accordance with the specific instructions on the data collection tool and any additional written instructions from the PI.

- The number of individual activities necessary to accomplish this EPI can be coordinated between the PI and the assigned ASI.
- When completing an individual activity for an EPI, the ASI will answer and enter responses only to those questions that can be answered from the activity being reported.

- **Observations requiring immediate action.**
  - Significant issues or items of immediate concern, as determined by the inspector, arising from inspections shall be verbally conveyed to the PI in a timely manner.
  - This is not a departure from what conscientious inspectors have always done in the past when they observed a safety concern or possible regulatory violation.
  - Pick up the telephone and call the appropriate PI, Assistant PI, APM, or PPM at the CHDO/CMO, or send an email message or a FAX. The key point is to coordinate with the PI and work with the CMT to determine appropriate actions.

Figure 4-3. Safety Attribute Inspection (SAI)

Figure 4-3-1, Sample Safety Attribute Inspection Data Collection Tool.

Figure 4-3-2, General Instructions for Completion of Safety Attribute Inspections.

Figure 4-3-3, Standard Safety Attribute Inspection Data Collection Tool Questions.

Figure 4-3-1. Sample Safety Attribute Inspection Data Collection Tool.

Element: 3.1.1 Passenger Handling

Purpose of this Element (Air Carrier's responsibility): To provide a safe environment during passenger boarding.

Objective (FAA responsibility): To determine if the air carrier's Passenger Handling process includes safety attributes.

Inputs:
- Flight Attendants, Flight Crew Members, and Ground Agents
- Passengers
- Alcohol
- Crew Resource Management
- Medical Requirements
- Safety Information
- Marketing

Outputs:
- Screened Passengers
- Briefed Passengers
- Safely Transported Passengers

Performance Measures:
- No passengers were boarded who appeared to be intoxicated.
- No passengers were boarded that presented a safety risk.
- Passenger information cards, specific to the make and model of the aircraft, were available to all passengers.
- Cabin environment was safe throughout the flight.
- No passengers became intoxicated during flight.
- All handicapped persons were provided transportation in accordance with the air carrier's procedures.
- No unauthorized passengers were served alcoholic beverages.
- Passenger disturbances were documented and communicated.

SRR:
- 121.571 (a - c), Briefing passengers before takeoff.
- 121.573 (a - d), Briefing passengers: Extended overwater operations.
- 121.574 (a - c), Oxygen for medical use by passengers.
- 121.575 (a - d), Alcoholic beverages.
- 121.583 (a - e), Carriage of persons without compliance with the passenger carrying requirements of this part.
- 121.586 (a - d), Authority to refuse transportation.
- 121.198 (e), Cargo service airplanes: Increased zero fuel and landing weights.
- 121.291 (a-d), Demonstration of emergency evacuation procedures.
- 121.311 (b, e, h), Seats, safety belts, and shoulder harnesses.
- 121.317 (f-h, l, k), Passenger information requirements, smoking prohibitions, and additional seat belt requirements.
- 121.327 (c), Supplemental oxygen: Reciprocating engine powered airplanes.
- 121.329 (c), Supplemental oxygen for sustenance: Turbine engine powered airplanes.
- 121.331 (c), Supplemental oxygen requirements for pressurized cabin airplanes: Reciprocating engine powered airplanes.
- 121.333 (e), Supplemental oxygen for emergency descent and for first aid; turbine engine powered airplanes with pressurized cabins.

Other CFRs and/or FAA Guidance:

- Refer to appropriate Advisory Circulars.
  CFR Preamble:
- 61 FR 56409, November 1, 1996, Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting From Federal Financial Assistance; Nondiscrimination on the Basis of Handicap in Air Travel
- 63 FR 10528, March 4, 1998, Nondiscrimination on the Basis of Disability in Air Travel

SRR SPECIFIC INFORMATION

SRR	Intent	Inspectors
121.571 (a)	To require the operator to orally brief passengers on safety related information pertinent to the flight.	***Certification:*** *Operations and CSI* ***Surveillance:*** *ASI*
121.571 (b)	To specify the content of and requirement for information cards available to each passenger.	***Certification:*** *ASI* ***Surveillance:*** *ASI*
121.571 (c)	To require the air carrier to describe in its manual all procedures for passenger briefing.	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.573 (a, c, d)	To ensure that passengers are provided with a briefing and demonstration of floatation devices prior to flying overwater.	***Certification:*** *Operations and CSI* ***Surveillance:*** *ASI*
121.573 (b)	To require the air carrier to describe in its manual all extended overwater procedures for passenger briefing.	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.574 (a - c)	To specify the conditions under which passenger medical oxygen may be carried and operated.	***Certification:*** *ASI* ***Surveillance:*** *ASI*
121.575 (a)	To prohibit passengers from consuming alcoholic beverages not provided by the carrier.	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.575 (b)	To specify the restrictions for serving alcoholic beverages.	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.575 (c)	To deny boarding to passengers that appear to be intoxicated.	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.575 (d)	To require the air carrier to report alcohol related disturbances within five days.	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.583 (a - c)	To specify the conditions under which certain passengers may be carried without complying with passenger carrying regulations.	***Certification:*** *N/A* ***Surveillance:*** *Operations and CSI*

SRR	Intent	Inspectors
121.583 (d)	To require the air carrier's manual to contain procedures for the carriage of persons who do not meet the normal passenger carrying requirements.	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.586 (a)	To specify the conditions under which handicapped persons may be refused transportation.	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.586 (b - d)	To specify the documentation and distribution of written procedures associated with the carriage of handicapped persons.	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.198(e)	**TBD**	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.291 (a-d)	**TBD**	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.311 (b), (e), (h)	**TBD**	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.317 (f-h), (l), (k)	**TBD**	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.327 (c)	**TBD**	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.329 (c)	**TBD**	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.331 (c)	**TBD**	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.333 (e)	**TBD**	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*
121.583 (e)	**TBD**	***Certification:*** *Operations and CSI* ***Surveillance:*** *Operations and CSI*

3.1.1 Passenger Handling

SECTION 1 - RESPONSIBILITY ATTRIBUTE

Objective: To determine if there is a clearly identifiable, qualified, and knowledgeable person who is accountable for the quality of the Passenger Handling process.

To meet this objective, the inspector will accomplish the following tasks:

1. Identify the person who is responsible for the quality of the Passenger Handling process.
2. Review the description in the Manual that delineates the duties and responsibilities of the person.
3. Evaluate the person's qualifications and work experience (or resume', if appropriate).
4. Review the appropriate organizational chart.
5. Discuss the Passenger Handling process with the person.

To meet this objective, the inspector will determine and record answers to the following questions:

1. Is there a clearly identifiable person who is answerable for the quality of the Passenger Handling process?	❑ **YES** **If yes, provide the name:** ❑ **NO**
2. Does the person understand the procedures associated with the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**
3. Does the person understand the controls associated with the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**
4. Does the person understand the interfaces associated with the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**
5. Does the person understand the process measurements associated with the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**
6. Is the responsibility of this position clearly documented in the air carrier's Manual(s)?	❑ **YES** **If no, explain:** ❑ **NO**
7. Are the qualification standards for this position clearly documented?	❑ **YES** **If no, explain:** ❑ **NO**
7a. Are the qualification standards for this position appropriate for the duties that are assigned?	❑ **YES** **If no, explain:** ❑ **NO**
8. Does the person meet the qualification standards?	❑ **YES** **If no, explain:** ❑ **NO**
9. Does the person acknowledge that he/she has responsibility for the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**
10. Does the person know who has authority to establish and modify the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**

3.1.1 Passenger Handling

SECTION 2 - AUTHORITY ATTRIBUTE

Objective: To determine if there is a clearly identifiable, qualified, and knowledgeable person with the authority to establish and modify the Passenger Handling process.

To meet this objective, the inspector will accomplish the following tasks:

1. Identify the person who has the authority to establish or modify the Passenger Handling process.
2. Review the description in the Manual that delineates the duties and responsibilities of the person.
3. Evaluate the person's qualifications and work experience (or resumé, if appropriate).
4. Review the appropriate organizational chart.
5. Discuss the Passenger Handling process with the person.

To meet this objective, the inspector will determine and record answers to the following questions:

1. Is there a clearly identifiable person who has authority to establish and modify the air carrier's policies for the Passenger Handling process?	❑ **YES If yes, provide the name:** ❑ **NO If no, explain:**
2. Does the person understand the procedures associated with the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**
3. Does the person understand the controls associated with the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**
4. Does the person understand the interfaces associated with the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**
5. Does the person understand the process measurements associated with the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**
6. Is the authority of this position clearly documented in the air carrier's Manual(s)?	❑ **YES If no, explain:** ❑ **NO**
7. Are the qualification standards for this position clearly documented?	❑ **YES If no, explain:** ❑ **NO**
7a. Are the qualification standards for this position appropriate for the duties that are assigned?	❑ **YES If no, explain:** ❑ **NO**

3.1.1 Passenger Handling ***SECTION 2 - AUTHORITY ATTRIBUTE***	
8. Does the person meet the qualification standards?	❑ **YES** **If no, explain:** ❑ **NO**
9. Does the person acknowledge that he/she has authority for the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**
10. Does the person know who has the responsibility for the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**
11. Are the procedures for delegation of authority clearly documented for the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**

3.1.1 Passenger Handling

SECTION 3 – PROCEDURES ATTRIBUTE

Objective: To determine if the air carrier has documented procedures for accomplishing the Passenger Handling process.

To meet this objective, the inspector will accomplish the following tasks:

1. Review the documented instructions and information related to the Passenger Handling process to ensure that they contain who, what, where, when, and how.
2. Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this SAI.
3. Discuss the Passenger Handling process with appropriate personnel to gain an understanding of the procedures.
4. Observe the Passenger Handling process to gain an understanding of the procedures.

To meet this objective, the inspector will determine and record answers to the following questions:

1. Do written procedures exist to achieve the desired result of the Passenger Handling process:

1.1 Does the air carrier have written procedures to conduct oral briefings of passengers (including extended overwater, if applicable)? [SRR 121.571 (a), 121.573 (a)]	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.2 Does the air carrier have written procedures to supplement the oral briefing with information cards (including extended overwater, if applicable)? [SRR 121.571 (b)]	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.3 Does the air carrier have written procedures for briefing passengers (including extended overwater, if applicable)? [SRR 121.571 (c), 121.573 (b)]	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.4 Does the air carrier have written procedures for the use of medical oxygen by passengers? [SRR 121.574 (a - c)]	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.5 Does the air carrier have written procedures in place to prohibit consumption of passenger-supplied alcoholic beverages? [SRR 121.575 (a)]	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.6 Does the air carrier have written procedures in place to restrict the service of alcoholic beverages? [SRR 121.575 (b)]	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**

3.1.1 Passenger Handling ***SECTION 3 – PROCEDURES ATTRIBUTE***	
1.7 Does the air carrier have written procedures in place to deny boarding to passengers who appear intoxicated? [SRR 121.575 (c)]	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.8 Does the air carrier have written procedures in place to report alcohol related disturbances to the FAA? [SRR 121.575 (d)]	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.9 Does the air carrier have written procedures in place for carriage of passengers who are not required to comply with the normal passenger handling requirements? [SRR 121.583 (a - d)]	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.10 Does the air carrier have written procedures in place to refuse air transportation to handicapped passengers? [SRR 121.586 (a - d)]	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
2. Do the procedures identify: who, what, where, when and how?	❑ **YES If no, explain:** ❑ **NO**
3. Are the procedures in compliance with the CFR(s)?	❑ **YES If no, explain:** ❑ **NO**
4. Do the procedures conform to other written guidance (e.g., Operations Specifications, FAA Orders, Airworthiness Directives, Advisory Circulars, Handbook Bulletins, Directives, and Manufacturer's Recommendations)?	❑ **YES If no, explain:** ❑ **NO**
5. Does the air carrier have the resources to support the written procedures for the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**
6. If alternate procedures exist for use during irregular conditions, do they achieve the same desired results as the primary procedures so that an equivalent level of safety is maintained (e.g., a manual system used as a result of equipment failure)?	❑ **YES If no, explain:** ❑ **NO** ❑ **N/A, No alternate procedures exist for this element**
7. Are the procedures published in different manuals relating to the Passenger Handling process consistent?	❑ **YES If no, explain:** ❑ **NO**
8. Does the air carrier have a documented method for assessing the impacts of procedural changes to the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**

3.1.1 Passenger Handling

SECTION 4 - CONTROL ATTRIBUTE

Objective: To determine if checks and restraints are designed into the Passenger Handling process to ensure a desired result is achieved.

To meet this objective, the inspector will accomplish the following tasks:

1. Review the documented instructions and information related to the Passenger Handling process.
2. Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this SAI**.**
3. Discuss the Passenger Handling process with appropriate personnel to gain an understanding of the controls.
4. Observe the Passenger Handling process to gain an understanding of the controls.

To meet this objective, the inspector will determine and record answers to the following questions:

1. Are the following checks and restraints built into the Passenger Handling process:

1.1 Does the air carrier have a standardized methodology for assisting employees in detecting intoxicated passengers?	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.2 Does the air carrier have a standardized passenger briefing announcement for use by flight attendants?	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.3 Does the air carrier have a method to ensure that the passenger information card is applicable only to the aircraft type and model?	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.4 Does the air carrier have a method of ensuring that each passenger has access to a passenger information card? [121.571 (b)]	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.5 Does the air carrier have a method for supplying medical oxygen for use by passengers?	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.6 Does the air carrier have a method to ensure that flight attendants know how to administer medical oxygen?	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**

3.1.1 Passenger Handling ***SECTION 4 - CONTROL ATTRIBUTE***	
1.7 Does the air carrier have a method to ensure that all passengers are provided with the following:	
1.7.1 Approved seat and safety belts?	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.7.2 Unobstructed access to exits?	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.7.3 Specialized briefings for handicapped passengers who may need them?	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
2. Do the checks and restraints ensure the desired result is achieved for the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**
3. Does the air carrier have a documented method for assessing the impacts of any changes made to checks and restraints in the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**
4. Does the air carrier have the resources to support the checks and restraints for the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**

3.1.1 Passenger Handling

SECTION 5 – PROCESS MEASUREMENT ATTRIBUTE

Objective: To determine if the air carrier measures and assesses the Passenger Handling process, to identify and correct problems or potential problems.

To meet this objective, the inspector will accomplish the following tasks:

1. Review the documented instructions and information related to the Passenger Handling process.
2. Discuss the Passenger Handling process with appropriate personnel to gain an understanding of the process measures.
3. Observe the Passenger Handling process to gain an understanding of the process measures**.**

To meet this objective, the inspector will determine and record answers to the following questions:

1. <Deleted>	
2. Does the air carrier's Passenger Handling process include the following process measurements:	
2.1 Does the air carrier solicit and analyze feedback from company personnel regarding passenger handling?	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
2.2 Does the air carrier periodically monitor company personnel performing passenger screening duties?	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
2.3 Does the air carrier conduct an independent evaluation of passenger handling?	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
2.4 Does the air carrier have policies and procedures regarding the involvement of the flight deck crew in resolving passenger incidents?	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
3. Does the air carrier document their process measurement methods and results?	❑ **YES If no, explain:** ❑ **NO**
4. Are the air carrier's process measurement methods effective?	❑ **YES If no, explain:** ❑ **NO**
5. Does the air carrier use their process measurement results to improve their programs?	❑ **YES If no, explain:** ❑ **NO**
6. Are the process measurement results accessible to FAA?	❑ **YES If no, explain:** ❑ **NO**
7. Does the organization that conducts the process measurement have direct access to the person with responsibility for the Passenger Handling process?	❑ **YES If no, explain:** ❑ **NO**

3.1.1 Passenger Handling ***SECTION 5 – PROCESS MEASUREMENT ATTRIBUTE***	
8. Does the air carrier have the resources to support the process measurement for the Passenger Handling process?	❑ **YES** **If no, explain:** ❑ **NO**

3.1.1 Passenger Handling

SECTION 6 - INTERFACES ATTRIBUTE

Objective: To determine if the air carrier identifies and manages the interactions between the Passenger Handling process and the other element processes within the air carrier organization.

To meet this objective, the inspector will accomplish the following tasks:

1. Review the documented instructions and information related to the Passenger Handling process.
2. Discuss the Passenger Handling process with appropriate personnel to gain an understanding of the interfaces.
3. Observe the Passenger Handling process to gain an understanding of the interfaces.

To meet this objective, the inspector will determine and record answers to the following questions:

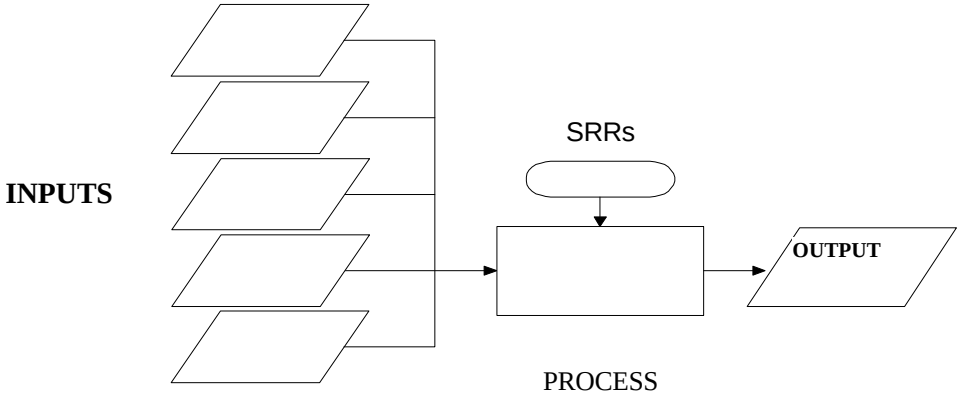
1. Are the following interfaces identified for the Passenger Handling process:

1.1 <Deleted>	
1.2 Flight Attendant Duties/Cabin Procedures (Element 3.1.2)	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.3 Airman Duties/Flight Deck Procedures (Element 3.1.3)	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.4 Carry-On Baggage (Element 3.1.5)	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.5 Exit Seating (Element 3.1.6)	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.6 Carriage of Cargo (Element 3.1.8)	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.7 Flight/Load Manifest/Weight and Balance Control (Element 3.2.2)	❑ **YES If no or N/A, explain:** ❑ **NO** ❑ **N/A**

3.1.1 Passenger Handling ***SECTION 6 - INTERFACES ATTRIBUTE***	
1.8 Training of Flight Attendants (Element 4.2.4)	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.9 Appropriate Airman/Crewmember Checks and Qualifications (Element 4.3.2)	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.10 Station Facilities (Element 5.1.5)	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.11 Safety Program	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.12 Manual Currency (Element 2.1.1)	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.13 Content Consistency Across Manuals (Element 2.1.2)	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.14 (Manual) Distribution (Element 2.1.3)	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
1.15 (Manual) Availability (Element 2.1.4)	❑ **YES** **If no or N/A, explain:** ❑ **NO** ❑ **N/A**
2. List any additional interfaces identified:	
3. Are there written procedures for the use of air carrier personnel in the application of these interfaces?	❑ **YES** **If no, explain:** ❑ **NO**
4. Are there controls to ensure that interfaces occur?	❑ **YES** **If no, explain:** ❑ **NO**
5. Are the interfaces between the Passenger Handling process and other processes treated consistently in the Manual(s)?	❑ **YES** **If no, explain:** ❑ **NO**

Figure 4-3-2. General Instructions for Completion of Safety Attribute Inspections.

The following general instructions provide explanations and guidance for each section of the Safety Attribute Inspection (SAI) data collection tools.



Element Relationship Diagram

Each SAI data collection tool was developed by first defining the function of the element and determining the regulatory requirements for that function; then, the inputs and outputs to that function were identified. These features are graphically displayed on the element relationship diagram. Each element should be thought of as a process that an Air Carrier performs. Since some elements (processes) are based upon specific approvals or authorizations, not all of them will apply to every operator.

ELEMENT SUMMARY INFORMATION

Element: Each element is identified by name and by a unique 3-character number. The first character refers to the system number, the second character is the subsystem and the third character is the element.

Purpose of this Element: Each element should be considered a process that is performed by an Air Carrier. The "Purpose" statement defines the intent of that process. An Air Carrier's process is made up of a series of policies and procedures, which should encompass the six system safety attributes that are contained in each SAI.

Inputs: Inputs are the raw materials, records, information, services, or resources coming into a process (e.g. money, staffing, and equipment). Each SAI lists the inputs that are provided to that function. In many cases, a process contains inputs from the outputs of other processes within the organization.

Outputs: Outputs are the product of a process, the goal being safety or the services the carrier performs that ensure safety. Outputs might be an airworthy aircraft or a pilot that has been properly trained. Each SAI lists the outputs that are provided by that process.

Performance Measures: The purpose of performance measures is to determine the effectiveness of the carrier's procedures in meeting the desired output of the process. Performance measures are typically based on FAA requirements and other safety standards.

SRR: Specific Regulatory Requirements (SRR) are included with each SAI as a reference for the inspector. An SRR is a Federal Aviation Regulation that is refined to its most specific level, which requires an operator's compliance (either once or continually). The SRR were used during the development of the SAI data collection tools to help define the function of the element and to develop some of the procedures attribute and controls attribute questions. Some of these regulations pertain to certification and some are surveillance-based. Only those SRR that must be complied with on a continual basis are included in the data collection tools.

Questions that are based upon regulatory requirements have an SRR appended to them. Therefore a "no" answer to such a question may require an enforcement investigation. On the other hand, questions that do not have an SRR appended to them are not regulatory in nature, but are based upon system safety principles. A no answer to this type of question, while not a violation, would be an indicator of a risk that may require additional action on the part of the CMT.

Reference to "Other CFRs" means Title 14 Code of Federal Regulations (14 CFR) other than those categorized as Specific Regulatory Requirements (SRR).

When no Specific Regulatory Requirements are quoted, and a program is approved or accepted, the operator is bound to perform the operation in accordance with its approved or accepted program. Should the operator fail to perform in accordance with their approved or accepted program, then the possibility exists that they would be in violation of additional CFRs (e.g. 14 CFR 119.5(l), 121.153(a)(2), 121.367 (c), and 43.13(c)).

Other CFRs and FAA Guidance: SAIs are accomplished by a team of trained and qualified FAA Operations, Airworthiness, and/or Cabin Safety Aviation Safety Inspectors (ASI) assigned to an Air Transportation Oversight System (ATOS) Certificate Management Team (CMT).

Prior to beginning any planned surveillance, the inspector should review the SAI data collection tool, and the Other CFRs and FAA Guidance for background information that is necessary to accomplish the inspection. If the guidance has been updated since the SAI was published, the inspector should read the latest version even if it is not specifically mentioned in the SAI. In addition, the inspector should review the related elements that are included in the associated EPI. The purpose of this review is to make the inspector aware of any other elements that may interface with this SAI which might benefit from a review to ensure that any related procedures do not conflict.

SRR SPECIFIC INFORMATION

This section provides additional specific information about each SRR. This information is presented in tabular format and includes: the regulation number, a brief plain language summary

of the intent of the SRR, and a description of which aviation safety inspector specialty would be most likely to accomplish the inspection of this element for both certification and surveillance. Note: The purpose of the Intent statement is to provide an understanding of why certain questions were formed during the development of the SAI. The Intent statement is not to be considered as a legal interpretation of an SRR.

SAFETY ATTRIBUTE SECTIONS

Objective: This defines FAA's responsibility and the scope of the inspection in general terms. Specific objectives are contained in each section of the SAI, as follows:

Section 1 – Responsibility Attribute
To determine if there is a clearly identifiable, qualified, and knowledgeable person who is accountable for the quality of the process.

Section 2 – Authority Attribute
To determine if there is a clearly identifiable, qualified, and knowledgeable person with the authority to establish and modify the process.

Section 3 – Procedures Attribute
To determine if the air carrier has documented procedures for accomplishing the process.

Section 4 – Control Attribute
To determine if checks and restraints are designed into the process to ensure a desired result is achieved.

Section 5 – Process Measurement Attribute
To determine if the air carrier measures and assesses the process to identify and correct problems or potential problems.

Section 6 – Interfaces Attribute
To determine if the air carrier identifies and manages the interactions between the process and the other element processes within the air carrier organization.

Tasks to accomplish:

Each data collection tool contains the statement, "*To meet this objective, the inspector will accomplish the following task(s):* and lists one or more tasks that will be completed during the inspection. Each task is made up of various activities. Some of the tasks that may be listed on an SAI are:

1. **Review the documented instructions and information related to the process to ensure that they contain who, what, where, when, and how.**
   The inspector should review and gain an understanding of the air carrier's policies and procedures for the element they are inspecting in order to plan their inspection activities. This will usually involve reviewing sections of the appropriate Operations Specifications, training programs or other guidance, as well as the manuals related to the process.

2. **Review the description in the Manual that delineates the duties and responsibilities of the individual.**
   The inspector needs to understand the air carrier's system sufficiently to know the duties and responsibilities of individuals assigned the Responsibility or Authority for each process.

3. **Evaluate the person's qualifications and work experience (or resume, if appropriate).**
   The purpose of this task is to determine that the individuals with responsibility or authority for certain processes meet the qualifications to hold that position. In some instances, there may be regulatory requirements for those qualifications and the CHDO may have a copy of the individual's resume on file. The assigned inspectors should coordinate with the PI when obtaining any resumes. In other instances the qualification may be a certain certification or rating that may be demonstrated by looking at that individual's training records or FAA certificate, or by evaluating some level of expertise or a particular background. It is not the intent to require a formal written resume from all individuals.

4. **Review the appropriate organizational chart.**
   The inspector needs to understand the air carrier's organization sufficiently to identify who has the authority and responsibility for certain processes. In any organization there is not always one individual who is in charge. Authority and responsibility are often disbursed. A person can be an individual, a department, a committee, or a position (such as pilot in command).

5. **Discuss the process with the person.**
   The purpose of an SAI is to determine if the air carrier's policies and procedures are sufficient to ensure compliance with the CFRs and safe operations by that air carrier. Data collection tool questions are not to be asked of, and answered by, air carrier personnel during interviews or discussions. In completing this task, the inspector asks questions to find out what the air carrier's policies and procedures are and if they have common safety attributes built into their systems. The inspector should <u>not</u> ask a person, "Are you responsible?" Rather, he or she should ask questions and make observations to find out enough about how the carrier performs that process to determine who is responsible.

6. **Observe the process to gain an understanding of the procedures.**
   The main reason for observing the process being performed is to increase the inspector's depth of knowledge and understanding of the process. Through previous research, the inspector has gained "book" knowledge of how the process should function. Actual observations of the process while the carrier's personnel are performing it increases the inspector's understanding of the air carrier's procedures.

<u>Questions to answer</u>:

Each SAI lists a series of questions for the SAI Team to answer based on their observations during the various activities. Questions on each activity report are answered in response to what was observed on that single activity. The data collection tools are <u>not</u> designed to be a checklist of questions that are asked directly of air carrier personnel. It is inappropriate to give the air carrier a copy of the data collection tool and ask them to "fill it out". Each SAI attribute section includes the statement "***To meet this objective, the inspector will determine and record answers***

to the following questions." The following paragraphs describe some of the typical questions in each section of the data collection tool.

Section 1 – Responsibility Attribute, and

Section 2 – Authority Attribute

Each of these two sections asks a series of questions about a **clearly identifiable person** who is answerable (responsible) for the quality of the process or who has authority to establish and modify the process. The first question requires that a name be entered. There is confusion on the intent of this question and the definition of the word "person". In any organization there is not always one individual who is in charge - authority and responsibility are often disbursed. A person can be an individual, a department, a committee, or a position.

The intent is to identify the highest level person (at the appropriate level within the organization) who is responsible or has the authority for that particular element of the air carrier's system.

The SAI Team is also asked to determine **if that individual understands the various attributes** associated with the process and **if the individual knows they have responsibility (authority)** for the process. This information is gathered indirectly through observations and discussions, rather than quizzing an individual on safety attributes that they may or may not be familiar with.

The final series of questions in these two sections require that the SAI Team **determine if the position description and qualifications are clearly documented** by the air carrier and if the individual meets the qualification standards.

Section 3 – Procedures Attribute

In order to respond to the questions in this section, the SAI Team needs to gain a thorough understanding of the carrier's policies and procedures for this specific process. The purpose is to determine the method used by the air carrier to accomplish the process associated with the element. The Team is asked to **determine if written procedures exist**, if the procedures contain sufficient detail, and if they are in compliance with the CFRs. A reference in this section to the manual where these procedures are located provides helpful information for future SAI and EPI inspections, and may be entered into the text box that becomes available when a "yes" response is entered into the ATOS data repository. A list of procedures for this process is included in this section. Many of these listed procedures have specific regulatory requirements for this process, although the air carrier may have some latitude in implementing others. For this reason, a response of "no" to one of these questions doesn't necessarily mean that the company is in violation of a regulation or that any action is required.

Section 4 – Control Attribute

Controls are checks and restraints that must be built into the air carrier's processes to help ensure that the desired result of the process is continually achieved. While most controls are not regulatory, they are an important safety attribute with desirable features that help to reduce risk. Each SAI lists a series of controls. Some common types of controls are flags, data system

backups, authorized signatures, separation of duties, or a final review. It is important to note that air carriers must be able to demonstrate their controls. Few of these controls have their basis in specific regulatory requirements. For this reason, a response of "no" to one of these questions doesn't necessarily mean that the company is in violation of a regulation or that any action is required.

Section 5 – Process Measurement Attribute

The questions in this section focus on how well the air carrier knows that their process is working, what they use to measure how well the process is working, how they document that information, and how they use that information to improve their process. The purpose of this attribute is to require that a quality assurance function be developed by the air carrier to detect, identify, analyze, and document potential causes of non-conformity within their process. Each SAI lists process measures that are specific to that element. Process measures are designed to measure if the air carrier's policies, procedures, and controls are achieving the desired results or the purpose for that element. In most cases, process measures are non-regulatory. For this reason, a response of "no" to one of these questions, while not a violation, would be an indication of a risk that may require additional action on the part of the CMT.

Section 6 – Interfaces Attribute

This section focuses on the interactions between the process under inspection and other processes within the air carrier's organization. Each SAI data collection tool lists some of the interfaces that are specific to that element. There may be additional interfaces that the inspection team identifies which should be listed on the data collection tool. The first two questions typically ask if the air carrier has identified these interfaces as being part of their process. The next two questions "Are there written procedures for the use of air carrier personnel in the application of these interfaces?" and "Are there controls to ensure that interfaces occur?" might be more easily understood if the inspection team remembers that the questions are really asking if there are procedures (or controls) to ensure that the air carrier is **managing** the interfaces that occur.

A final question looks for consistent treatment of related processes in the air carrier's manuals. For example: The De-Icing program is a process that involves Flight Crews, Dispatchers, and Station Personnel. This process will have procedures and controls in at least three manuals: General Operations Manual, Dispatcher Manual, and Station Manual. In addition, it will be included in training programs for various company personnel. Identifying the interfaces helps to determine all the places where this process might be documented thereby preventing the development of conflicting procedures.

Master SAI Record:

SAI are team inspections, with each team responsible for a subsystem or portion of a subsystem, under the leadership of a team coordinator. This structure allows the CMT to assess the entire subsystem and obtain a "big picture" look at how the air carrier operates. Inspectors may be tasked to respond only to certain elements within a system, to certain attribute sections within a

data collection tool, or even to certain questions. It is necessary to only answer each SAI question once before the SAI Team Coordinator can save the Master SAI to final. When completing an individual activity for an SAI, the ASI will answer and enter responses only to those questions that can be answered directly from the activity being reported. The SAI team will coordinate their individual activities as necessary to accurately answer all the questions on the Master SAI.

SAI Activities:

SAI involve multiple activities over multiple dates (a sufficient number of activities to answer all the questions and perform a thorough, quality inspection). They are typically performed at the air carrier's general offices, main operations base or main maintenance base. A general rule of thumb is that any time that the common data field information changes, (date, location, etc.) it is a new activity and should be recorded as a new report, even if only a single question can be answered. Since an activity is a snapshot of the operator's system at that moment, most activities will probably be opened and closed in a single day.

SAI Common Data Fields.

Enter all the information you have available from each activity. At a minimum, every inspection activity should include Activity Start Date, Activity End Date, and Departure Point/Location. Additional guidance for each data field is found in the ATOS Automation User Guide.

Response Definitions:

Since the SAI questions are answered with either a "yes" or "no" and for some SAI questions, a third answer option of "N/A," it is important to understand the implications of those answers. Since the SAI is a team inspection, it is important that the team members reach consensus on each question or should the same question be answered more than once, the answers must be consistent.

YES means that the specific question being asked, for the particular SAI activity being observed, complies with applicable specific regulatory requirements (SRR) and any FAA guidance appropriate to that element. Further, a "yes" indicates that the observed procedures incorporate any system safety principles approved/accepted for the air carrier in the applicable safety attribute.

NOTE: A "yes" answer always indicates a positive response. Great care should be taken when determining if the response is positive. If the inspector records a positive answer using a qualifier (e.g. "Yes, but…") this may indicate that the answer should actually be a "No." In that case the inspector should re-evaluate his/her answer.

NO means that on the specific question being asked, for the particular SAI activity being observed, the operator either does not comply with applicable specific regulatory requirements (SRR) and FAA guidance for that element or that the operator's procedures do not incorporate system safety principles within the attribute.

No can also mean that system safety procedures are weak in the area being evaluated and that the operator's approved/accepted procedures are inadequate.

Observed non-compliance with regulations should necessitate coordination with the Principal Inspector and may result in an enforcement investigation. It should be noted that an **enforcement investigation would not be appropriate** when a "No" response identifies weaknesses in a system that has literal compliance with the regulations.

NOTE: Significant issues or items of immediate concern, as determined by the inspector, shall be verbally conveyed to the PI in a timely manner. Either an electronic message or memorandum should follow up verbal conveyance.

NOT APPLICABLE (N/A) should only be used for those questions that do not apply to all air carriers. N/A means that a particular question does not apply to the operator being evaluated due to such reasons as type of operation, type of aircraft, or area of operation, etc. N/A does not mean "not observed" or that not enough time was available to answer the question. If a question applies to an operator, then an observation must be conducted to appropriately answer the question.

Comment Fields:

All comments should be written in clear, concise language, using sentence case and proper spelling. Explanations should be complete and descriptive, with as much information as necessary for other CMT members to understand the comments without requiring further information from the inspector. Comments submitted in the ATOS automated tools should include who, what, where, when, why, and how. References should be entered when appropriate.

ASI should not enter the word "None" in any comment field. If a particular comment field does not apply, just leave it blank. Comment fields should be used to report observed facts, not inspector opinion. Comments that do not directly relate to the question being answered are inappropriate. An important function of the Data Evaluation Program Manager (DEPM) is the review of comment fields to ensure that quality data enters the ATOS database. The comments entered into the ATOS Data Repository are expected to conform to the guidance contained in the *"ATOS Data Quality Guidelines"* (See Figure 5-1). **The DEPM shall return any records for correction that do not meet these guidelines.**

SAI Team Concept

An SAI team may be composed of any combination of operations, airworthiness, or cabin safety inspectors. The team coordinator should assign elements, sections, attributes, or questions to the specialty most closely related to the area being evaluated.

An SAI Team evaluates an ATOS subsystem or a portion of a subsystem. Each team member is responsible for completing certain elements within a system, or a particular attribute section, or possibly certain questions within an attribute section. After performing these inspection activities, each SAI team member is responsible for reporting his or her own responses into

ATOS automation. Although communication between team members is essential, there is no need to share answers between team members for the purpose of having each team member answer every question. In fact, this is an undesirable action resulting in duplication. It is the function of the SAI Team Coordinator (TC) to ensure that inspection activities are not repetitive or redundant, and that all inspection activities are completed with all questions answered accurately on the SAI.

The best example of the application of this approach is illustrated by reviewing the responsibility and authority attribute sections of the SAI. It was never intended for three, four, or five inspectors to talk to the same person if that same person is either responsible for or has the authority for multiple elements in a subsystem. Therefore, it is possible that one inspector can answer the responsibility and authority questions for several elements within the subsystem that is being evaluated. The purpose of SAI Team concept is to allow the distribution of inspection activities among the SAI team so that the required data is collected in a timely manner and only once.

There may be instances when a SAI Team or a group of inspectors from a Team work together. This is certainly required during the initial planning for the inspection activities. Another team activity that might be appropriate is completing the Interface Attribute and comparing the information between multiple manuals. At the completion of this particular activity, the team coordinator may input all of the responses; or the responses could be divided up between the inspectors for input, but there should not be duplicate entries.

Figure 4-3-3. Standard Safety Attribute Inspection Data Collection Tool Questions.

#	Question	Significance of "No" response
	SAI Section 1 – Responsibility	
1.	Is there a clearly identifiable person who is answerable for the quality of the <element name> process?	Timely action probably required by PI – serious system flaw.
2.	Does the person understand the procedures associated with the <element name> process?	Action probably not required at observing inspector level.
3.	Does the person understand the controls associated with the <element name> process?	Action probably not required at observing inspector level.
4.	Does the person understand the interfaces associated with the <element name> process?	Action probably not required at observing inspector level.
5.	Does the person understand the process measurements associated with the<element name> process?	Action probably not required at observing inspector level.
6.	Is the responsibility of this position clearly documented in the air carrier's Manual(s)?	Timely action may be required by the PI if this position is required by regulation.
7.	Are the qualification standards for this position clearly documented?	Timely action may be required by the PI if this position is required by regulation.
7a.	Are the qualification standards for this position appropriate for the duties that are assigned?	Timely action may be required by the PI if this position is required by regulation.
8.	Does the person meet the qualification standards?	Timely action may be required by the PI if this position is required by regulation.
9.	Does the person know that they have responsibility for the <element name> process?	Action probably not required at observing inspector level.
10.	Does the person know who has authority to establish and modify the <element name> process?	Action probably not required at observing inspector level.
	SAI Section 2 – Authority	
1.	Is there a clearly identifiable person who has authority to establish and modify the air carrier's policies for the <element name> process?	Action probably required by PI – serious system flaw.
2.	Does the person understand the procedures associated with the <element name> process?	Action probably not required at observing inspector level.
3.	Does the person understand the controls associated with the <element name> process?	Action probably not required at observing inspector level.
4.	Does the person understand the interfaces associated with the <element name> process?	Action probably not required at observing inspector level.
5.	Does the person understand the process measurements associated with the <element name> process?	Action probably not required at observing inspector level.
6.	Is the authority of this position clearly documented in the air carrier's Manual(s)?	Timely action may be required by the PI if this position is required by regulation.
7.	Are the qualification standards for this position clearly documented?	Timely action may be required by the PI if this position is required by regulation.
7a.	Are the qualification standards for this position appropriate for the duties that are assigned?	Timely action may be required by the PI if this position is required by regulation.

#	Question	Significance of "No" response
8.	Does the person meet the qualification standards?	Timely action may be required by the PI if this position is required by regulation.
9.	Does the person know they have authority for the <element name> process?	Action probably not required at observing inspector level.
10.	Does the person know who has the responsibility for the <element name> process?	Action probably not required at observing inspector level.
11.	Are the procedures for delegation of authority clearly documented for the <element name> process?	Timely action may be required by the PI if this position is required by regulation.
	SAI Section 3 – Procedures	
1.	Do written procedures exist to achieve the desired result of the <element name> process? (Note: This is followed by a list of specific procedures – with references to the SRR if they are required by regulation)	Action probably required by PI – serious system flaw. Action required by observing inspector if written procedure is required by regulation– investigation to determine if air carrier conducted this process without the required written procedures.
2.	Do the procedures identify: who, what, where, when, and how?	Action probably not required at observing inspector level.
3.	Are the procedures in compliance with the CFR(s)?	Action probably required by observing inspector – investigation to determine if air carrier conducted this process using procedures that were not compliant with CFRs.
4.	Do the procedures conform to other written guidance (e.g., Operations Specifications, FAA Orders, Airworthiness Directives, Advisory Circulars, Handbook Bulletins, Directives, and Manufacturer's Recommendations)?	Action probably required by observing inspector – investigation to determine if air carrier conducted this process using procedures that were not compliant with other written guidance.
5.	Does the air carrier have the resources to support the written procedures for the <element name> process?	Action probably not required at observing inspector level.
6.	If alternate procedures exist for use during irregular conditions, do they achieve the same desired results as the primary procedures so that an equivalent level of safety is maintained (e.g., a manual system used as a result of equipment failure)?	Action probably not required at observing inspector level.
7.	Are the procedures published in different manuals relating to the <element name> process consistent?	Action probably not required at observing inspector level.
8.	Does the air carrier have a documented method for assessing the impacts of procedural changes to the <element name> process?	Action probably not required at observing inspector level.
	SAI Section 4 – Controls	
1.	Are the following checks and restraints built into the Safety <element name> process? (Note: This is followed by a list of specific controls – with references to the SRR if they are required by regulation)	Action required by observing inspector if the control is required by regulation– investigation to determine if air carrier conducted this process without the required control in place.
2.	Do the checks and restraints ensure the desired result is achieved for the <element name> process?	Action probably not required at observing inspector level.

#	Question	Significance of "No" response
3.	Does the air carrier have a documented method for assessing the impacts of any changes made to the checks and restraints in the <element name> process?	Action probably not required at observing inspector level.
4.	Does the air carrier have the resources to support the checks and restraints for the <element name> process?	Action probably not required at observing inspector level.
	SAI Section 5 – Process Measurement	
1.	<question deleted on revised SAIs>	
2.	Does the air carrier's <element name> process include the following process measurements? (Note: This is followed by a list of specific process measures – with references to the SRR if they are required by regulation.)	Action required by observing inspector if the process measure is required by regulation– investigation to determine if air carrier conducted this process without the required control in place.
3.	Does the air carrier document their process measurement methods and results?	Action probably not required at observing inspector level.
4.	Are the air carrier's process measurement methods effective?	Action probably not required at observing inspector level.
5.	Does the air carrier use their process measurement results to improve their programs?	Action probably not required at observing inspector level.
6.	Are the process measurement results accessible to the FAA?	Action probably not required at observing inspector level.
7.	Does the organization that conducts the process measurement have direct access to the person with responsibility for the <element name> process?	Action probably not required at observing inspector level.
8.	Does the air carrier have the resources to support the process measurements for the <element name> process?	Action probably not required at observing inspector level.
	SAI Section 6 – Interfaces	
1.	Are the following interfaces identified for the <element name> process? (Note: This is followed by a list of specific interfaces – with references to the element, subsystem or system, if applicable)	Action probably not required at observing inspector level.
2.	List any additional interfaces identified:	Action probably not required at observing inspector level.
3.	Are there written procedures for the use of air carrier personnel in the application of these interfaces?	Action probably not required at observing inspector level.
4.	Are there controls to ensure that interfaces occur?	Action probably not required at observing inspector level.
5.	Are the interfaces between the <element name> process and other processes treated consistently in the Manual(s)?	Action probably not required at observing inspector level.

Figure 4-4. Element Performance Inspection (EPI).

Figure 4-4-1, Sample EPI Data Collection Tool.

Figure 4-4-2, General Instructions for Completion of Element Performance Inspections.

Figure 4-4-3, Standard Element Performance Inspection Data Collection Tool Questions.

Figure 4-4-1. Sample Element Performance Inspection (EPI) Data Collection Tool.

Element 3.1.1: Passenger Handling

Purpose of this Element (Air Carrier's responsibility): To provide a safe environment during passenger boarding.

Objective (FAA responsibility): To determine if the Air Carrier adheres to its procedures and controls for Passenger Handling.

Specific Instructions for this EPI:
To accomplish this EPI, the ASI will observe the overall screening and boarding process of passengers in the ticketing area, gate area, jetway, ramp, and aircraft. Be cognizant of required placards and if sufficient company personnel are present to ensure safe movement of passengers throughout boarding.

Task 4. Appropriate personnel are agents, ground services, flight attendants, etc.

There may be occasional circumstances that it is not possible to observe an event listed on this EPI. The intention of **Question 1.1**, and other similarly worded questions, is an answer of "Yes" would indicate positive compliance, since negative compliance was not observed. If during an inspection activity the inspector doesn't observe the events listed in that question, leave the question unanswered until the last inspection activity. Then if the inspector doesn't observe the event during the last planned activity for the open EPI, answer the question "Yes" because:

> *If during observation of the embarkation of the flight(s) no passengers were boarded who appeared intoxicated, then positive compliance was observed and the response would be "Yes."*

Question 1.2. Example: "Unruly passengers" may present a safety risk.

Question 2. The reference to procedures refers to what the inspector observed during the inspection activity, such as normal passenger handling and/or handling of problem passengers, unaccompanied minors, etc.

Question 3. Examples of Passenger Handling Controls:

- *"Notices of dangerous goods requirements were displayed and easily viewed by passengers in locations where the air carrier issues tickets, checks bags and in gate areas;"*
- *"Passengers having approval to carry weapons were boarded with appropriate documentation in accordance with the Air Carrier's procedures;" or,*
- *"Notices of firearms in checked baggage requirements were displayed at every point where passengers tendered checked bags for transport."*

Related EPIs:

3.1.2 Flight Attendant Duties/Cabin Duties
3.1.5 Carry-on Baggage Program
3.1.6 Exit Seating
4.2.6 Training of Station Personnel
5.1.5 Station Facilities

3.1.1 Passenger Handling

To meet this objective, the inspector will accomplish the following tasks (at the inspection location(s) where applicable):

1. Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this EPI.
2. Review the associated SAI, with emphasis on the Controls Attribute section.
3. Review the Passenger Briefing Cards and Manual(s) related to Passenger Handling.
4. Interview the appropriate personnel.
5. Observe and assess the results of Passenger Handling.
6. Review Passenger Handling reports.

To meet this objective, the inspector will determine and record answers to the following questions:

1.	Were the following performance measures met:	
1.1	*No passengers were boarded who appeared to be intoxicated.*	❑ **YES** ❑ **NO** **If no, explain:**
1.2	*No passengers were boarded who appeared to present a safety risk.*	❑ **YES** ❑ **NO** **If no, explain:**
1.3	*Passenger information cards, specific to the make and model of the aircraft, were available to all passengers.*	❑ **YES** ❑ **NO** **If no, explain:**
1.4	*Passengers have approval to carry weapons in accordance with the Air Carrier's procedures.*	❑ **YES** ❑ **NO** **If no, explain:**
1.5	*All prisoners were boarded in accordance with the Air Carrier's procedures.*	❑ **YES** ❑ **NO** **If no, explain:**
1.6	*All handicapped persons were boarded and provided transportation in accordance with the Air Carrier's procedures.*	❑ **YES** ❑ **NO** **If no, explain:**
1.7	*Medical oxygen was provided for passengers in accordance with the Air Carrier's procedures.*	❑ **YES** ❑ **NO** **If no, explain:**
1.8	*Passenger disturbances were handled in accordance with the Air Carrier's procedures.*	❑ **YES** ❑ **NO** **If no, explain:**
1.9	*Approved child restraint systems were boarded and handled in accordance with the Air Carrier's procedures.*	❑ **YES** ❑ **NO** **If no, explain:**
1.10	*No dangerous goods were boarded contrary to the Air Carrier's procedures.*	❑ **YES** ❑ **NO** **If no, explain:**
2.	Were the procedures for Passenger Handling followed?	❑ **YES** ❑ **NO** **If no, explain:**

3.1.1 Passenger Handling		
3. Were the Passenger Handling controls followed?	❑ YES ❑ NO	**If no, explain:**
4. Were the Passenger Handling reports completed in accordance with the Air Carrier's procedures?	❑ YES ❑ NO	**If no, explain:**
5. <Deleted>		

Figure 4-4-2. General Instructions for Completion of Element Performance Inspections (EPI).

The following general instructions provide explanations and guidance for each section of the Element Performance Inspection data collection tools.

Purpose of this Element (Air Carrier's responsibility):
This defines the intent of the element and the scope of responsibility of the Air Carrier.

Objective (FAA responsibility):
This defines the scope of the inspection in general terms. Any specifics are contained in the Specific Instructions listed on each individual EPI.

Specific Instructions for this EPI:
All EPI must be accomplished by trained and qualified FAA Operations, Airworthiness, or Cabin Safety Aviation Safety Inspectors (ASI) assigned to an Air Transportation Oversight System (ATOS) Certificate Management Team (CMT). Specific instructions may include additional training, background or qualifications that may be helpful in determining inspector assignments for EPI and completing the EPI.

Prior to beginning any planned surveillance, the inspector should read the data collection tool and review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of the EPI. Specific instructions include additional references, background information, or manuals that should be reviewed, as well as suggestions for specific types of activities.

Related EPI:
A list of related elements is provided primarily for reference and background information. Inspectors should review the data collection tools for related elements. There may be situations when activities for one EPI may be accomplished in conjunction with activities of related EPI.

Tasks to accomplish:
Each data collection tool contains the statement, "To meet this objective, the inspector will accomplish the following tasks (at the inspection location(s) where applicable):" and lists certain tasks that should be completed during the inspection. Each task is made up of various activities. Some common tasks that may be listed on an EPI are:

1. **Review the FAA Guidance and Specific Regulatory Requirements (SRR) included in the supplemental information section of this EPI.**
   Other CFR's, FAA guidance, and specific regulatory requirements are included with each EPI as reference for the inspector. At the time of publication, the guidance material was considered to be current. Subsequent revisions to EPI will incorporate updates to this guidance material. However, revisions will not be generated based solely on out-of-date guidance. Even if it is out of date or superseded, the listed guidance may be useful as a starting point in researching current guidance.

Some of the listed guidance and regulations pertain to certification while some relate directly to surveillance of the element. Other guidance or regulations may be indirectly related. The term "DIRECTLY RELATED" is defined as guidance that relates directly to surveillance under the associated EPI. "INDIRECTLY RELATED" guidance may correlate with surveillance, but is more likely associated with certification.

2. **Review the associated SAI, with emphasis on the Controls Attribute section.**

A review of the associated SAI data collection tool and the results of any completed SAI provide the inspector with useful information about the air carrier's systems and can help the inspector to identify areas of potential risk. The controls attribute section of each SAI lists checks and restraints that must be built into the air carrier's process to help ensure that the desired results are consistently achieved. While most controls are not regulatory, they are an important safety attribute with desirable features that help to reduce risk. The inspector will be asked in a subsequent question if the controls were being followed.

3. **Review policies and procedures.**

The inspector should review and gain an understanding of the air carrier's policies and procedures for the element they are inspecting in order to plan their inspection activities. This will usually involve reviewing sections of the appropriate Operations Specifications, manuals, training programs, or other guidance. A subsequent question will ask the inspector if the air carrier followed its policies and procedures.

4. **Discuss with the appropriate personnel.**

The purpose of an EPI is to determine if the air carrier is following their approved policies and procedures and to confirm that those policies and procedures are achieving the desired result. Data collection tool questions are not designed to be answered by air carrier personnel during discussions. In completing this task, the inspector asks questions to find out if the air carrier's employee or contractor is following the policies and procedures of the air carrier.

5. **Observe and assess the results.**

Each element defines a specific program or process of the air carrier that achieves certain results as described in the "purpose" section of the EPI. The inspector must plan to conduct various activities that will assist them in determining if the policies and procedures are being followed and if those policies and procedures are effective. For example: in assessing the results of a "Deicing" EPI, the inspector may perform various activities at different locations. These activities may include inspecting the storage of deicing materials at station facilities, observing deicing in progress on various aircraft from the ramp, watching deicing procedures during cockpit or cabin en route inspections, and visiting the operations center during icing conditions.

6. **Review and assess the records.**

The inspector needs to understand the air carrier's system sufficiently to know what records and reports are generated or used during the processes and procedures for the element. A representative sample of these records should be reviewed and assessed for compliance with regulations and the air carrier's policies. A separate activity record is not

necessarily required for each individual record or report, but should be completed for each group of records or reports at a specific location on the date of observation.

Questions to answer:

Each EPI lists a series of questions for the inspector to answer based on their observations during the various activities. Questions on each activity report are answered in response to what was observed on that single activity. The data collection tools are not designed to be a checklist of questions that are asked directly of air carrier personnel. Based upon the scope of the EPI and complexity of the air carrier's process, inspectors should develop a plan of research, observation, inspection, and evaluation that will result in the gathering of quality data. Typically, the EPI questions will include the following:

1. **Were the following performance measures met?**
   Each EPI lists performance measures that are specific to that element. Performance measures determine if the air carrier's process is achieving the desired results [refer to Purpose of this element (Air Carrier's responsibility)]. Although it's not a prerequisite, performance measures are mostly based on regulatory requirements.

2. **Were the policies and procedures followed?**
   The inspector needs to gain a thorough understanding of the carrier's policies and procedures in order to answer this question. Responses are only for the activity currently being conducted. All policies and procedures will not be observed during each activity. In certain instances question 2 and some parts of question 1 may seem to be repetitive. Each of those questions should still be answered independently of the other. Question 1 is focused on the results of the performance measures that are built into the air carrier's process. Question two is focused on the air carrier's policies and procedures themselves.

3. **Were the controls followed?**
   This question refers to the controls that are itemized in the associated SAI controls attribute section. Controls are checks and restraints that must be built into the air carrier's process to help ensure that the desired results (purpose of the element) are consistently achieved. A review of those controls will help the inspector answer this question. Not all the controls will be observed during each activity.

Master EPI Record: All questions must be answered in order to save the Master EPI to final. To do this multiple inspection activities will typically be accomplished for each EPI. These inspection activities are reported using an individual activity record that has the exact same questions as the Master EPI record. When completing an individual activity for the EPI, the ASI will answer and enter responses only to those questions that can be answered directly from the activity being reported. Each inspector shall conduct as many individual activities as necessary to accurately answer all the questions on the Master EPI. Most master EPI records will be opened and closed in a reasonably short timeframe, typically between 30-60 days.

EPI Activities: EPI usually involve multiple activities over multiple dates and may involve multiple locations (a sufficient number of activities to answer all the questions and perform a thorough, quality inspection). A general rule of thumb is that any time that the common data

field information changes, (date, location, aircraft, etc.) it is a new activity. It is not the intent to have an activity record for every individual record you look at, but may be each set of records at that location on that day. Since an activity is a snapshot of what the operator is doing at that moment, most activities will probably be opened and closed in a single day.

EPI Common Data Fields.
Enter all the information you have available from each activity. At a minimum, every inspection activity should include Activity Start Date, Activity End Date, and Departure Point/Location. If the inspection activity involves an aircraft, the registration number and make, model, and series must be entered. If the activity involves an aircraft flight, then the arrival point, departure point, and flight number must be entered. If the activity includes an en route inspection, the control number from FAA Form 8430-13, Request for Access to Aircraft, must be entered. Specific instructions for conducting each EPI and reporting those activities are found in that data collection tool. Additional guidance for each data field is found in the ATOS Automation User Guide.

Response Definitions:
Since the EPI questions are answered with either a "yes" or "no" and for some EPI questions, a third answer option of "N/A," it is important to understand the implications of those answers.

YES means that the specific question being asked, for the particular EPI activity being observed, complies with applicable specific regulatory requirements (SRR) and any FAA guidance appropriate to that element. Further, a "yes" indicates that the observed procedures and system safety principles approved/accepted for the air carrier are being followed.

A "yes" answer always indicates a positive response. Great care should be taken when determining if the response is positive. If the inspector indicates a positive answer using a qualifier (e.g. "Yes, but…") this may indicate that the answer should actually be a "No." In that case the inspector should re-evaluate his/her answer.

There may be rare circumstances when it is not possible to observe an event listed on the EPI (e.g. boarding of an intoxicated passenger). On those EPI the questions are worded so that "Yes" answer would indicate compliance since the event was not observed. The specific instructions for those EPIs have further details on how to appropriately answer the questions.

"NO" means that on the specific question being asked, for the particular EPI activity being observed, the operator either does not comply with observed specific regulatory requirements (SRR) and applicable FAA guidance for that element, or that the operator's procedures are not being followed. No can also mean that system safety procedures are weak in the area being evaluated and that the operator's approved/accepted procedures are inadequate.

Observed non-compliance with regulations should necessitate coordination with the Principal Inspector and may result in an enforcement investigation. It should be noted that an enforcement investigation would not be appropriate when a "No" response identifies weaknesses in a system that has literal compliance with the regulations or in the case where, in the inspector's opinion, any approved/accepted procedures are inadequate.

NOTE: Significant issues or items of immediate concern, as determined by the inspector, shall be verbally conveyed to the PI in a timely manner. Either an electronic message or memorandum should follow up verbal conveyance.

NOT APPLICABLE (N/A) is only provided as an option for those questions that may not apply to all air carriers. N/A means that a particular question does not apply to the operator being evaluated due to such reasons as type of operation, type of aircraft, or area of operation, etc. N/A does not mean "not observed" or that not enough time was available to answer the question. If a question applies to an operator, then enough observations should be conducted to appropriately answer the question. Since this option is associated only with questions that are not applicable due to the types of operations authorized for the particular air carrier, a simple comment must be entered as to why this was marked N/A (e.g. Air Carrier does not conduct Flag operations).

Comment Fields:
All comments should be written in clear, concise language, using sentence case and proper spelling. Explanations should be complete and descriptive, with as much information as necessary for other CMT members to understand the comments without requiring further information from the inspector. Comments submitted in the ATOS automated tools should include who, what, where, when, why, and how. References may be entered when appropriate.

ASIs should not enter the word "None" in any comment field. If a particular comment field does not apply, just leave it blank. Comment fields should be used to report observed facts, not inspector opinion. Comments that do not directly relate to the question being answered are inappropriate. An important function of the Data Evaluation Program Manager is the review of comment fields to ensure that quality data enters the ATOS database. The DEPM shall return any records for correction that do not meet the ATOS data quality guidelines.

Figure 4-4-3. Standard Element Performance Inspection (EPI) Data Collection Tool Questions.

#	Question	Significance of a "No" response to an SRR-based question.
	Element Performance Inspections	
1.	Were the following performance measures met? *(Note: This is followed by a list of specific performance measures – with references to the SRR if they are required by regulation.)*	The inspector should investigate to determine if the air carrier operated contrary to regulatory requirements.
2.	Were the written procedures adhered to for the <element name> process?	The inspector should investigate to determine if the air carrier operated contrary to regulatory requirements.
3.	Were the identified controls adhered to for the <element name> process?	The inspector should investigate to determine if the air carrier operated contrary to regulatory requirements.
4.	Did all observed records comply with procedures for the <element name> process? *(Note: This question is only included for elements that contain a reporting or record-keeping requirement.)*	The inspector should investigate to determine if the air carrier operated contrary to regulatory requirements.

Figure 5-1. ATOS Surveillance Reporting Guidelines.

- **General Instructions for reporting SAI/EPI activities.**
  - SAI and EPI usually involve multiple activities over multiple dates and may involve multiple locations (a sufficient number of activities to answer all the questions and perform a thorough, quality inspection).
  - The inspection record comprises all of these individual activity records.
  - The ATOS policy and procedures appendix says very little about inspection activities and inspectors have had a lot of questions about how many to do and how to know when it is time to close an activity.
  - A general rule of thumb is that any time that the banner information changes, (date, location, aircraft, etc.) it is a new activity.
  - It is not the intent to have an activity record for every individual record you look at, but maybe each set of records at that location on that day.
  - The function you are looking at may be more important than the time or place.
  - Most activities will probably be opened and closed in a single day.
  - An activity is a snapshot of what the operator is doing at that moment.
  - To get a clear, big-picture, you go out again and take another snapshot.
  - Don't try to become an analyst and "roll-up" the individual observations into a single activity that you report.

- **Reporting Observations unrelated to the SAI or EPI.**
  - There has been a lot of discussion about reporting "pop-ups" – things that an inspector happens upon while out in the field or special inspection requirements that come up.
  - The Dynamic Observation Reports provide a place to record surveillance observations that are unrelated to the element inspection being performed. A memorandum describing the appropriate use of those reports is in Figure 5-4.
  - Special inspection requirements can generally be accommodated through retargeting.
  - Handbook bulletins that require special surveillance activities generally include specific instructions for ATOS carriers.

- **ATOS does not change an inspector's responsibility to investigate and act on safety or regulatory concerns.**
  - There is nothing to preclude any inspector from investigating something they notice or have reported to them concerning an ATOS carrier, but that is an investigation activity, not a surveillance activity.
  - Investigation, certification, and technical administration activities are still reported under PTRS.
  - Remember to record the actions you have taken related to deficiencies observed in the Reporting Inspector Action Taken field.
  - In addition, you need to promptly notify the PI or other appropriate CHDO/CMO personnel via telephone or electronic mail if you observe a significant safety or regulatory concern that required your immediate action or may need additional investigation.

- **SAI/EPI Inspection Screen Data Fields.**
  - Enter all the information you have available from that activity.
  - Do NOT enter the word "**none.**" If a particular comment field does not apply, just leave it blank.
  - At a minimum, every inspection activity should include Activity Start Date, Activity End Date, and Departure Point/Location.
  - If the inspection activity involves an aircraft, the registration number and make, model and series must be entered.
  - If the activity involves an aircraft flight, arrival point, departure point, and flight number must be entered.
  - Specific instructions for conducting each EPI and reporting those activities are found in that data reporting tool.
  - Guidance for each data field is found in the ATOS Automation User Guide and in the ATOS Data Quality Guidelines.

- **Entering comments.**
  - Write in clear, concise language using sentence case and proper spelling.
  - Explanations should be complete and descriptive, with as much information as necessary for other CMT members to understand the findings without requiring further information from the inspector.
  - References should be entered when appropriate; such recording on the SAI where the procedures and controls for that element are located.

- **Name of a clearly definable person.**
  - Some questions require that a name be entered.
  - There is confusion on the intent of this question and the definition of the word "person".
  - In any organization there is not always one individual who is in charge; authority and responsibility are often disbursed.
  - A person can be an individual, a department, a committee, or a position.
  - The intent is to identify the highest level person who is responsible or has the authority for that particular element of the air carrier's system.

- **"Yes" responses.**
  - The data reporting tool questions are written so that "yes" is always a favorable response.
  - Read the question through and answer it based on just the activity that was performed.
  - For example, if the question asks "Were written procedures consistent across manuals?" Respond to that question only as it relates to the manuals you looked at during that activity. If you only looked at one manual, don't answer the question.

- **"Yes" responses do not require comments.**
  - "Yes" comments should not change the meaning of the "yes" response to "sometimes or maybe."
  - Any negative wording in a "yes comment" is inappropriate and probably indicates that the question should have been answered "no."
  - The comment/findings should be complete and descriptive.
  - The comment field is not intended to capture negative, unsatisfactory, or qualifying (yes,

but) information.
— The comment field is not intended as a catchall for describing inspection activities.

- **"Maybe."**
  — There is no "maybe" response. Questions are answered either yes or no.
  — If the inspector is unsure whether something observed was unsatisfactory or potentially unsatisfactory, the question should not be answered for that activity.
  — The inspector needs to do additional research and plan another activity, to make a definitive determination.

- **"No" responses.**
  — The data reporting tool questions are written so that "no" always indicates a negative response to the question.
  — Read the question through and answer it based on just the activity that was performed.
  — The intent was never that a single "no" answer would equate to an unsafe condition or a regulatory violation, unless that particular "no" has a regulatory basis.
  — The safety attributes on an SAI are organizational principles that provide a frame of reference to inspectors as they evaluate an operator's systems. A "no" answer for a system safety based question simply identifies a risk factor that requires further analysis.
  — A 'no" answer for a regulatory requirement would be handled through established compliance and enforcement procedures.
  — Inspectors need to be very careful in requiring air carriers to satisfy all questions. We should never require a response from the air carrier for each and every "no" answer.
  — Regulatory requirements (referenced on each data reporting tool) are the minimum safety standards and must be complied with where as system safety raises safety above this minimum.

- **Writing Explanations on "No" Responses.**
  — No answers require an explanation of the Who, What, Where, When, and How that caused the "no" response.
  — "No" responses provide valuable information that, when rolled up and analyzed with other similar data, may well lead to an increase in surveillance of a particular system element process even though no regulations were violated.
  — The explanations are captured in a database that is analyzed for trends or patterns to determine if any action is required by the CMT.

- **"Not Applicable (N/A)."**
  — "N/A" means not applicable at all to that air carrier's operation.
  — It does not mean you didn't look at that.
  — There really are questions that do not apply to an air carrier.
  — If the question is not applicable to the specific activity or observation the inspector is making at that point in time, then leave the question unanswered.
  — Misuse or overuse of not applicable corrupts the data.

- **Inspector Action Taken.**
  — This field provides a place to record actions taken by reporting inspectors related to

deficiencies observed during the inspection.

— These actions may include notifying appropriate air carrier personnel of a potential non-compliance, consulting with air carrier or other FAA officials to obtain additional information, or initiating an enforcement investigation.

— Do not enter a description of what you did to complete the particular inspection activity being reported. The intent of this field is NOT to capture what records you looked at or processes you observed.

- **PI Response Requested.**
  — The purpose of this field is to help the reporting inspector bring some specific information to the attention of the PI.
  — By checking this field, the inspector is asking the PI to review some information contained in the report and give the inspector some feedback.
  — This is not intended for use with time-critical information that needs a rapid response since the information is not available to the PI until after it has been evaluated and released to the ATOS data repository.

Figure 5-2. Memo Regarding Recording and Tracking of En Route Inspections.

U.S. Department
of Transportation

**Federal Aviation
Administration**

Memorandum

ATOS CMO
Gateway Building, Suite 131
45005 Aviation Drive
Dulles, VA 20166-7537

Subject: Recording and Tracking of En route Inspections Date: 12/20/99

From: Manager, ATOS CMO

To: Office Managers

The purpose of this memorandum is to clarify the recording and tracking of en route inspections by aviation safety inspectors assigned to Phase 1 ATOS Certificate Management Teams. FAA Order 8400.10 CHG 12 Appendix 6. Air Transportation Oversight System states on page 6-34, paragraph 3 that "En routes conducted by CMT members that do not include the accomplishment of one or more inspection activities of an SAI or EPI for their assigned air carrier are not reported in the ATOS Data Repository. These en routes shall be reported in PTRS, using the appropriate activity code for an en route inspection. En route inspections conducted by other than CMT members shall be reported in PTRS using the appropriate activity code." This policy is still applicable.

En routes conducted by CMT members that include the accomplishment of one or more inspection activities of an assigned EPI shall be recorded in the ATOS automated reporting system. The ATOS automated reporting system was designed for inspectors to record surveillance data in a system-based model. Therefore, it was not envisioned that this database be used for other tracking means and did not initially include a field to record the Form 8430-13, *Request for Access to Aircraft*. However, the 8430-13 is the key control document for the en route program and some offices have been requiring inspectors to record en route activities in both the ATOS reporting system and PTRS. This "double reporting" of en route activities imposes a burden on CMT members and corrupts the data collected. The ATOS reporting system has now been modified to include a data field to record the form 8430-13 control number for en routes conducted by CMT members while accomplishing assigned EPI activities. All other en routes, not in support of an SAI or EPI, should be recorded in PTRS using existing policy and procedures.

Finally, Paragraph 6 of Order 8000.75 contains procedures for the authorization of en route inspections and states that; "authorization for an en route inspection must be given by the inspectors' supervisor. En route inspections shall be approved by assigned work program or on an individual basis." The requirement for prior authorization shall be complied with by the supervisors' approval of an inspector's CSP work plan for SAIs and EPIs.

Larry Youngblut
Manager, ATOS Program office

Figure 5-3.

ATOS Data Quality Guidelines.

Version 2.0

June 01, 2001

- ***The Need for Quality Data.***

— The purpose of the Evaluation Module is to validate the data collected through the Surveillance Implementation process and to ensure that only high-quality information enters the ATOS data repository for analysis.
— The Evaluation Process provides the Certificate Management Team (CMT) with the means to evaluate the data collected through surveillance before the data enters the ATOS data repository.
— The output of the Evaluation Process is valid, accurate, technically relevant, and complete surveillance data that are ready for the Analysis Process.

- ***What is Quality Data?***

— Why collect data in the first place? Data collection has always been a part of problem resolution and an integral part of the scientific method. Data collection serves to help describe, document, and ultimately analyze existing conditions of an air carrier. It supplies information to support decision-making and communication.
— *Data is a set of facts that when compiled provides information for decision-making. Data represents real-world objects.*
— *An acceptable level of quality has been achieved if the data conforms to a defined specification and the specification correctly reflects the intended use.*
— Quality data provides a reliable measurement tool to assess the regulatory compliance and system safety of an air carrier. Quality data helps close the gap between the views of the real-world air-carrier system obtained by direct observation, and the view of the air carrier system obtained through data in the Information System.

- ***What is Poor Quality Data?***

— When the data doesn't reflect real-world conditions and is not easily understood this indicates poor quality data.
— Even accurate data, if it is redundant, or not interpretable by the user, is of little value. If the data is of insufficient quality, most of it will be unusable.
— Poor quality data is costly. Some of the impacts of poor data quality may include increased operational cost, difficulty in setting and executing strategy, and less effective decision-making.

- ***Impact of SAI/EPI/DOR Answers on Data Quality.***

— Before answering, "YES," "NO," or "N/A" to an EPI, SAI, or DOR question, it is important to understand the impact of the answer in regards to data quality. EACH REPORTING INSPECTOR has the responsibility to submit complete, accurate and quality inspection data.
— The collection and control of data can be constructed so the ATOS database meets the needs of the CMT in an efficient manner.

- ***Measuring Data Quality.***

— Some commonly used attributes or characteristics to measure data quality include accuracy, completeness, consistency, reliability, timeliness, uniqueness, and validity. As with the attributes in ATOS, interdependencies exist between data quality attributes.
— In order to assess the quality, data can be categorized into basic components called dimensions. Dimensions are aspects of data quality such as security, accuracy, objectivity, etc. ATOS controls some data quality dimensions through automation.
— Grouping attributes into the dimensions listed in the *Data Dimensions Table* below should help the inspector properly construct their comments in order to be complete and descriptive. Further, using the guidance listed below should help organize the information necessary to ensure comprehensibility and proper interpretation of the information.

- ***Reporting Inspector Responsibility.***

— Inspectors play an important role by incorporating certain data dimensions in their reporting. Before submitting an inspection record, a dimensional review of the data should be accomplished, thus reducing the possibility of non-concurrence or being returned to the Inspector for corrections.
— Before submitting a Dynamic Observation Report (DOR), the reporting Inspector should accomplish a dimensional review of the data and ensure that the DOR meets one of the following criteria:
  - Single-activity unplanned observation that is unrelated to the ATOS system element being inspected.
  - Single-activity unplanned observation where there is not an ATOS element that addresses the unique situation.
  - Observation that is related to the system element being inspected but is not covered by any of the Data Collection Tool questions for that element.
  - Observation made during a specific inspection events that is directed by Handbook Bulletin or other National directive.
  - Unplanned surveillance observation that is requested by a Principal Inspector, with instructions to inspect and report on a specific area of immediate concern outside the normal re-targeting.
— A *Data Dimensions Table* and a *Specific Data Requirements Table* have been provided in this document as tools for increasing the quality of inspection records.

- ***DEPM Responsibility.***

— The DEPM will use the following tables for determining acceptable levels of data quality during their evaluation of inspection records. If the data meets the defined Data Dimensions and Specific Data Requirements that the DEPM is able to evaluate, the DEPM will indicate concurrence and save the record to the ATOS Data Repository. The data will then be ready for analysis.

— The DEPM will return any inspection records that do not meet the Data Dimensions or Specific Data Requirements. The DEPM will coordinate with the reporting inspector in an

effort to resolve the data quality discrepancies.

— The DEPM will return any Dynamic Observation Reports (DOR) that do not meet the Data Dimensions, Specific Data Requirements, or Criteria listed under Inspector Responsibility in the preceding section. The DEPM will coordinate with the reporting inspector in an effort to resolve the data quality discrepancies.

— If, after conferring with the DEPM, the inspector still believes that the data conforms to the applicable data dimensions, the inspection record is retained in its original form. The DEPM will save the record to the ATOS Data Repository and enter a non-concurrence comment in the inspection record explaining the reasons for non-concurrence.

— Any SAI or EPI record that is saved to the ATOS Data Repository with a non-concurrence requires review and comment by the appropriate Principal Inspector.

- ***Manager Responsibility***

— Managers and supervisors have an important role in the oversight of all CMT activities, including the reporting of data.

— Managers and supervisors should ensure that inspectors who work for them record their surveillance activities in a timely fashion and that the inspectors adhere to the data quality guidelines.

— CMO managers, to ensure its proper use, should closely monitor the use of Dynamic Observation Reports for their CMT.

Data Dimensions Table		
Note: Data Dimension applicability is shown in parenthesis		
Data Dimension	**Definition**	**Measurement Examples:**
Accuracy (SAI, EPI, DOR)	Data must be technically correct, reliable, and free of error.	• All explanations and comments should be grammatically correct, using sentence case and proper spelling. • CFR and other references should be included, where appropriate.
Appropriate Amount of Data (EPI)	The number of activities required to properly assess a given element may vary considerably. Enough activities should be performed to accurately answer the questions on the Data Collection Tool. It is not reasonable to perform enough activities to ensure a specific statistical level of confidence. Instead, the activities conducted should be varied across time and location to obtain sufficient amounts of quality observations to reflect the performance (EPI) of the system element.	• Typically, at least 5 to 10 activities should be conducted during an EPI. • The reporting inspector should follow the PI instructions that pertain to the scope (time, location, etc.) of the inspection.
Appropriate Amount of Data (SAI)	Each SAI question should be answered only once by a member of the SAI Team in order to evaluate the adequacy of the system element.	• SAI Team Coordinators (TC) should work with team members to plan inspection activities and ensure that each Data Collection Tool question is answered once during the course of the inspection. • Although multiple activities may be required to complete an SAI, team members should avoid multiple responses to individual SAI questions.
Appropriate Amount of Data (DOR)	Each DOR shall consist of a single activity observation. If an observation consists of multiple findings related to the same system, sub-system, or element, a single DOR shall be completed. If an observation consists of multiple findings relating to several different systems, subsystems, or elements, a new DOR shall be completed for each separate finding.	• Record a single-activity "unplanned observation" that is unrelated to the ATOS system element being inspected. • Report a single-activity "unplanned observation" where there is not an ATOS element that addresses the unique situation. • Report a single-activity "unplanned observation" that is related to the system element being inspected but are not covered by the Data Collection Tool questions. • Report a single-activity "unplanned observation" on specific inspection events as directed by Handbook Bulletin or other National directive. • Report a single-activity "unplanned observation" that is requested by a Principal Inspector, with instructions to inspect and report on a specific area of immediate concern outside the normal re-targeting.

Data Dimensions Table		
Note: Data Dimension applicability is shown in parenthesis		
Data Dimension	**Definition**	**Measurement Examples:**
Completeness (SAI, EPI, DOR)	Data must be of sufficient breadth, depth, and scope for the task at hand. All necessary and relevant data is captured to show as complete a picture of the situation as possible.	• All applicable common data field information should be entered. • At a minimum, every activity must include Activity Start Date, Activity End Date, and Departure Point/Location. • If the activity involved an individual aircraft, the registration number and make, model and series must be entered. • If the activity involved an aircraft fleet, the make and model must be entered. • If the activity involved an aircraft flight, the arrival point, departure point, flight number, and 8430-13 number must be entered. • Explanations must include the "who, what, where, when, why, and how" to describe the observation. • Observations on SAI, EPI, or DOR that result in a "no" response due to an unsafe condition or possible regulatory non-compliance require action by the observing inspector that must be reported in the "reporting inspector action taken" text block. • **Element-based observation DOR** must include a response to at least one question with an explanation or comment, if applicable. • **Other Observation DOR** must include a complete description of the observed condition in the "Comment" block.
Consistency (SAI, EPI, DOR)	The data should be presented in the same format and be compatible with previous data.	• EPI/DOR: Responses, explanations, and comments within the activity report should not conflict with other responses, explanations, and comments within the **same activity report**. • SAI: Responses, explanations, and comments within the activity report should not conflict with other responses, explanations, and comments within the **same activity report**, or any other activity report within the **same inspection record**.

Data Dimensions Table		
Note: Data Dimension applicability is shown in parenthesis		
Ease of Understanding (SAI, EPI, DOR)	Data must be clear, without ambiguity, and easily comprehended.	• All explanations and comments should be written in clear, concise language. • Any abbreviations or non-defined acronyms used should be commonly understood within the aviation industry. • The DEPM must be able to read and understand what the explanation or comment means. • Explanations and comments must be complete and descriptive, with as much information as necessary for someone knowledgeable with the air transport industry to understand without requiring further information.
Objectivity (SAI, EPI, DOR)	Data must be unbiased (unprejudiced) and impartial.	• Explanations must be statements of fact or fact-based conclusions, based on actual observations, rather than inspector opinions.
Relevancy (SAI, EPI, DOR)	The data should be valid and applicable to the observation or question being answered.	• The response, explanation, or comment should directly relate to the specific question asked, and the "Yes," "No" or "N/A" response that was selected for that question. • The methodology used to collect the data was appropriate. • Explanations and comments should not include administrative information. (i.e. "James Doe completed Initial Operating Experience satisfactorily.")
Timeliness (SAI, EPI, DOR)	The age of the data must be appropriate for the task at hand. The inspection record should not be left open as a means to collect information that may present itself in the future.	• Most activities should normally be opened and closed in a single day. • The inspection data should be entered into the activity report and saved to final status as soon as practical after the activity is completed. • As a general rule, most EPI should be completed within 30-60 days and most SAI in 60-90 days. • Since DOR record single activity observations, they should generally be completed within a single day. • The reporting inspector should adhere to SAI/EPI Instructions provided by the Principal on timelines.

Data Dimensions Table		
Note: Data Dimension applicability is shown in parenthesis		
Value Added (SAI, EPI, DOR)	Data should be beneficial and provide advantages from their use.	• The word "None" shall not be entered as an explanation nor shall it be entered in any comment field. • Each explanation and comment must stand-alone and not refer to the response for another question. (i.e. "see above" or "same as question 3"). • Inspectors should not enter a description of what they did to complete the particular inspection activity being reported. • DOR should be used only to report an observation that the inspector has made. They are not used simply to make a record of an activity that was performed.

Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
Note: Field applicability is shown in parenthesis		
System (DOR)	• **DO** enter the appropriate System applicable to the observation from the drop down list provided for the field.	• If the observation that occurred can be related to an ATOS System, select the appropriate system from the drop-down list. • Example: "1.0 Aircraft Configuration Control."
Sub-system (DOR)	• **DO** enter the appropriate Sub-system applicable to the observation from the drop down list provided for the field.	• If the observation that occurred can be related to an ATOS Sub-system, select the appropriate subsystem from the drop-down list. • Example: "1.3 Maintenance Organization."
Element (DOR*) **Applies only to "Element-Based Observation" DOR*	• **DO** enter the Element applicable to the observation from the drop down list provided for the field.	• If the observation that occurred can be related to an ATOS Element, select the appropriate element from the drop-down list. • Example: "1.3.1 Maintenance Program."
Air Carrier (DOR)	• **Do** enter the air carrier applicable to the observation from the drop down list provided for the field.	• The report must be directed at a specific air carrier. • Select the air carrier's name from the drop down list provided. • Only ATOS air carriers are available in the drop down list.
PTRS Activity Code (DOR*) **Applies only to "Other Observation" DOR*	• **Do** enter the appropriate PTRS Activity Code applicable to the observation from the drop down list provided for the field.	• If the observation that occurred can be related to a PTRS activity code, select the appropriate code from the drop-down list. Note: Only 16XX, 36XX, and 56XX surveillance codes are available.
	• **DO NOT** use the DOR to	• En route inspections, which are not conducted

Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
	report a PTRS activity that was performed, such as an en route inspection.	as part of a targeted EPI, shall be reported in PTRS. • Other PTRS surveillance activities are not authorized under ATOS.
Activity Start Date (SAI, EPI, DOR)	• **DO** enter in mm/dd/yyyy format.	• "02/09/2000" or "11/24/2001" • The appropriate date may be selected from the pop-up calendar or typed into the field.
Activity End Date (SAI, EPI, DOR)	• **DO** enter in mm/dd/yyyy format.	• "02/09/2000" or "11/24/2001" • The appropriate date may be selected from the pop-up calendar or typed into the field.
Departure Point/Location (SAI, EPI, DOR)	• **DO** enter an airport identifier in the Departure Point/Location field for all surveillance activities.	• If the surveillance activity was not conducted on an airport, enter the airport identifier that was closest to the site of the surveillance in the Departure Point/Location field.
	• **DO** enter the 3-letter FAA airport identifier for airports within the 50 United States using all capital letters.	• "SFO" for San Francisco Intl airport.
	• **DO** enter the 4-letter ICAO airport identifier for airports outside of the 50 United States using all capital letters.	• Use "EGLL" for the London-Heathrow airport instead of the "LHR" OAG identifier.
	• **DO NOT** use OAG or carrier created identifiers.	• This normally applies only outside of the 50 United States. Use "MMEX" for Mexico City instead of the "MEX" OAG identifier.
Arrival Point (SAI, EPI, DOR)	• **DO** enter the 3-letter FAA airport identifier for airports within the 50 United States using all capital letters.	• Enter "ATL" for "The William B. Hartsfield Atlanta Intl" airport.
	• **DO** enter the 4-letter ICAO airport identifier for airports outside of the 50 United States using all capital letters.	• Use "RJAA" for the "New Tokyo Intl" airport instead of the "NRT" OAG identifier.
	• **DO** enter an airport identifier for the arrival airport if a flight number was entered in the Flight Number field.	• All scheduled flights have an arrival airport and a destination airport published. Make an entry for both airports. If a flight diverts to a new destination, enter the identifier for that airport, not the scheduled arrival point.
	• **DO NOT** use OAG or carrier created identifiers.	• This normally applies only outside of the 50 United States. Use "TJSJ" for San Juan, Puerto Rico instead of the "SJU" OAG identifier.
Certified Repair Stations Number (SAI, EPI, DOR)	• **DO** enter the full Flight Standards designated certificate number of the repair station.	• An example of a foreign repair station number is "OXEY097L" for Aeroelectronica. A domestic repair station number example is "XE5R213O" for Texas Aero Engine Services.
	• **DO NOT** use lower case letters in the entry.	• "abcd1234r" is not an acceptable entry.

Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
Aircraft Registration Number (SAI, EPI, DOR)	• **DO** enter an aircraft's full registration number if an individual aircraft was involved in the surveillance observation.	• "N123DL"
	• **DO** include the registration prefix as part of the entry.	• Some U.S. air carriers may use foreign registered aircraft. For statistical analysis reasons, it could be important to be able to discern what country holds the aircraft's registration. Valid examples include: • "N123DL", United States • "N123AA", United States • "G4321", Great Britain
	• **DO NOT** use air carrier designated Nose Numbers, Tail Numbers, etc.	• In some cases the carrier's Nose Number matches the core of the registration number. In many cases, they are not the same. The only valid way to uniquely identify a particular aircraft is through the country of registry's registration number.
	• **DO NOT** use lower case letters in the entry.	• "n123aa" is not an acceptable entry.
Make, Model, Series (SAI, EPI, DOR)	• **DO** select a Make-Model-Series or a Make-Model from the drop down list provided for the field if the activity involved aircraft.	• If a particular aircraft was involved as the subject of the surveillance or directly involved in the surveillance, enter a Make-Model-Series from the drop down list. • If the activity was oriented to a fleet of aircraft that include several series of like Makes and Models, enter just the Make-Model from the drop down list.
	• **DO** ask the DEPM to add any needed Make-Model or Make-Model-Series aircraft to the drop down list.	• It is a responsibility of the DEPM to maintain an accurate and current fleet manifest of the CMT's aircraft that is used to populate the drop down list.
	• **DO NOT** enter a Make-Model-Series or a Make-Model if the activity did not involve aircraft.	
Flight Number (SAI, EPI, DOR)	• **DO** enter the flight number if a revenue flight was involved in the observation and the Reporting Inspector was on-board the flight.	• Maintenance, training, and administrative non-revenue flight numbers may be entered if they are known. However, they are not mandatory.
	• **DO NOT** enter a prefix to the flight number.	• A valid flight number entry for an American Airlines flight could be "1247". • An invalid flight number entry for the same American Airlines flight would be "AA1247". • The automation knows the carrier was American Airlines because the record is associated with the American Airlines CSP.

Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
Simulator Device ID (SAI, EPI, DOR)	• **DO** enter the correct "Simulator ID" when a simulator was involved in the surveillance.	• The correct Simulator ID can be verified by the simulator certificate or by the "SIMULATR.DB" Paradox table in the "FSAS" folder located on your local area network.
FAA 8430-13 Number (SAI, EPI, DOR)	• **DO** enter the 8430-13 number if the 8430-13 was used during the conduct of the inspector's assigned ATOS surveillance.	• If an 8430-13 was used during **non-ATOS assigned surveillance**, the 8430-13 should be entered in the required PTRS record.
Response Not Answered (Left Blank) (SAI, EPI)	• **DO** schedule another SAI or EPI activity to observe the element question at a later time, if the question's subject was not observed during the activity and is applicable to the carrier.	• If the element question asked, "Were the written procedures adhered to for the AD Management process?" and no procedures were observed the response should not be selected and the explanation should be left blank.
(SAI, EPI)	• **DO** follow the specific instructions in the SAI or EPI concerning not answered responses.	• There may be occasional circumstances when it is not possible to observe an event listed on an EPI. For example, an inspector may not observe an intoxicated passenger during an entire EPI. Specific instructions tell the inspector what to do when in these circumstances.
(SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*	• **DO NOT** enter a response if the question was not observed during the conduct of an activity and "N/A" is not an appropriate response.	• If the question's subject was not observed during the surveillance activity and the subject was applicable to the carrier, then the response should be left blank.
(SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*	• **DO NOT** enter a response if the question asks "Were written procedures consistent across manuals?" and only one manual was inspected.	• Entries must be responsive to the question.
(SAI, EPI, DOR)	• **DO NOT** enter a response if you are unsure whether something observed was unsatisfactory or potentially unsatisfactory.	• There is no "maybe" response. The inspector needs to do additional research and plan another activity to make a definitive determination if the correct response should be "Yes" or "No".

Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
Response **"Yes"** (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*	• **DO** enter "Yes" to indicate the requirements were met.	• The Data Collection Tool questions are written so that "Yes" is always a favorable response. • A "Yes" answer always indicates a positive response. Great care should be taken when determining if the response is positive. If the inspector indicates a positive answer using a qualifier (e.g. "Yes, but…") this may drive the answer to actually be a "No." In that case, the inspector should re-evaluate their comments and their answer to ensure it is not contrary to the "Yes" response. • Answer the question based on just what was observed during the activity.
Response **"Yes"** (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*		• SAI: A "Yes" response indicates that for the specific question being asked and for the particular SAI activity being observed, the operator complies with observed specific regulatory requirements (SRR) and applicable FAA guidance for that element. A "Yes" response for SAI also indicates the applicable safety attributes are incorporated into the operator's procedures. • EPI/DOR: A "Yes" response indicates that the specific question being asked, for the particular activity being observed, the operator complies with observed SRR and applicable FAA guidance for that element. Further, a "Yes" would indicate that the observed procedures and system safety principles approved/accepted for the air carrier are being followed.
"Yes" Comments (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*	• Yes comments are not mandatory. • Yes comments are associated with each specific question and not generalized for the entire activity. • Yes comments must meet all current Data Quality Guideline Dimensions.	**Yes comments may describe:** • Which regulatory requirement was complied with. • Which FAA guidance was complied with. • Which air carrier procedure was followed. • Which system safety principle was observed. • Which air carrier controls or interfaces were observed. • Which manuals or records were reviewed. • Which applicable safety attributes are incorporated into an air carrier system or program.

Explanations are required for a "No" or "N/A" response.		
Field	**DOs and DO NOTs**	**Examples and Explanations**
Response **"No"** (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DORs*	• **DO** enter "No" to indicate the requirements were not met.	• The questions are written so that "No" always indicates a negative response to the question. • The significance of a "No" response depends on the specific Data Collection Tool question that is being asked. • **SAI**: A "No" response on the specific question being asked, for the particular SAI activity being observed, may indicate that the operator either does not comply with observed specific regulatory requirements (SRR) and/or applicable FAA guidance for that element or that the operator's procedures do not incorporate the applicable safety attribute. A "No" response can also mean that system safety procedures are weak in the area being evaluated or that the operator's approved/accepted procedures are inadequate. • **EPI/DOR**: A "No" response on the specific question being asked, for the particular activity being observed, may indicate that the operator either does not comply with observed specific regulatory requirements (SRR) and/or applicable FAA guidance for that element or that the operator's procedures are not being followed. A "No" response can also mean that system safety procedures are weak in the area being evaluated or that the operator's approved/accepted procedures are inadequate.

Explanations are required for a "No" or "N/A" response.		
Field	**DOs and DO NOTs**	**Examples and Explanations**
Response **"No"** (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*		• The intent was never that a single "No" answer would equate to an unsafe condition or a regulatory violation, unless that particular "No" has a regulatory basis and the inspector observed a possible violation or an unsafe condition.
Response **"N/A"** (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*	• **DO** enter "N/A" when a particular question does not apply to the air carrier's operation being evaluated.	• If the air carrier's type of operation, type of aircraft, or area of operation does not apply due to the air carrier's Operational Specifications and/or Principal Inspector instructions for that particular inspection, only then is "N/A" an appropriate response.
"No" Explanations (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*	• **DO** explain the reasons for your "No" response.	• An explanation of the "who, what, where, when, and how" that caused the "No" response must be entered. The explanation should be plain and comprehensible.
	• **DO** write your explanation so it is understandable.	• The explanation should be written in clear, concise language. • Abbreviations and non-defined acronyms used should be commonly understood within the aviation industry. • The DEPM should be able to read and understand what the explanation means. • Explanations should be complete and descriptive, with as much information as necessary for someone knowledgeable with the air transport industry to understand without requiring further information.
	• **DO** write your explanation so that it answers the question in a responsive way.	• The explanation must be pertinent to the question's intent. The explanation should have a logical, precise relevance to the matter at hand.

Explanations are required for a "No" or "N/A" response.		
Field	**DOs and DO NOTs**	**Examples and Explanations**
"No" Explanations (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DORs*	• **DO** select an applicable ATA code.	• ATA codes should reflect the known primary and secondary aircraft systems that were identified as being related to the principle cause of the "No" response. Otherwise, the codes should be left blank.
	• **DO** write your explanation so that it is technically correct, reliable, and free of error.	• The explanation should be grammatically correct. • The explanation should be written with complete sentences that are punctuated and capitalized correctly. • The explanation should not contain spelling errors.
	• **DO** include references where appropriate.	• CFR and other references should be included in explanations.
	• **DO** make each explanation stand-alone.	• There is no direct link between the explanation for one question and another. Each explanation must stand-alone for effective analysis and reader understanding.
	• **DO NOT** refer to the explanation for another question.	• "See above" or "same as question 3" or "refer to the Tulsa Main Base Report" are all examples of references to avoid.
	• **DO NOT** use the explanation field to critique the ATOS process.	• The "Problem Reporting & Feedback" hyperlink is the proper avenue to use for improvement suggestions and reporting of deficiencies in ATOS.
	• **DO NOT** enter opinions in the explanation.	• The explanation should be statements of fact or fact-based conclusions. Fact-based conclusions are based on actual observations or facts rather than inspector opinions.

Explanations are required for a "No" or "N/A" response.		
Field	**DOs and DO NOTs**	**Examples and Explanations**
"No" Explanations (Continued) (SAI, EPI, DOR*)	• **DO NOT** enter the word "None" by itself in the explanation field.	• Entry of anything contrary to the ATOS Data Quality Guidelines degrades the quality and integrity of the data. Use of spaces, periods, or other characters by themselves to circumnavigate the requirement for an explanation will not be acceptable.
"N/A" Explanations (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*	• **DO** explain the reasons for your "N/A" response.	• If the air carrier's type of operation, type of aircraft, or area of operation does not apply due to the air carrier's Operation Specifications and/or the Principal Inspectors instructions for that particular inspection, only then is "N/A" an appropriate response. A factual statement must be entered as to why the response was "N/A" (e.g. ABC Airlines is not approved in their Operation Specification to conduct RVSM operations).
"Other Comments, use space below" field (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*	• **DO** refer to SAI/EPI specific instructions for further guidance on the use of this field.	• Specific instructions will advise users how and where to answer specific questions within the Data Collection Tool.
	• **DO** refer to the question number.	• If the inspector enters information specific to one of the questions, the question number must be included along with the comment.
	• **DO** include a comment in all "Other Observation" DOR.	• Since the primary purpose of a DOR is to record unplanned observations not surveillance activities, a DOR for "Other Observations" is incomplete without a description of the observation in the comment block.
	• **DO NOT** enter negative remarks within the comment.	• Negative explanations should be entered in an explanation field of a question with a "No" response, not in "Other Comments."

Explanations are required for a "No" or "N/A" response.		
"Other Comments, use space below" field (SAI, EPI, DOR*) **Applies only to "Element-Based Observation" DOR*	• **DO NOT** include comments that do not add value to the ATOS process.	• The comment, "The procedures were followed and are adequate." is of no value. • DEPMs will evaluate the information contained in the comment field to ensure the data is appropriate.
	• **DO NOT** use the comment field to critique the ATOS process.	• The "Problem Reporting & Feedback" hyperlink from the Home page of ATOS is the proper avenue to use for improvement suggestions and reporting of deficiencies in ATOS.
"**Comments**" **field** (DOR*) **Applies only to "Other Observation" DOR*	• **DO** enter what was observed in the course of the observation.	• Describe in detail what was observed and include all relative facts, i.e. who, what where, when, why, and how, as applicable. • Entries must be statements of fact or fact-based conclusions, based on actual observations.
	• **DO NOT** enter what actions the inspector conducted during the course of the observation.	• Inspectors should not enter a description of what they **did** to complete the particular inspection activity being reported.
"**Inspector Action Taken" field** (SAI, EPI, DOR)	• **DO** record actions taken by reporting inspectors as a result of the deficiencies observed.	• These actions may include notifying appropriate air carrier personnel of a potential non-compliance, consulting with air carrier or other FAA officials to obtain additional information, or initiating an enforcement investigation.
	• **DO NOT** enter a description of what was done during the observation.	• Inspectors should not enter a description of what they did to complete the particular inspection activity being reported.

Figure 5-4. Dynamic Observation Reports (DOR) Memorandum.

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subj: ATOS Dynamic Observation Reports (DOR) Date: January 25, 2001

From: Manager, ATOS CMO

To: Certificate Management Team (CMT) Members
Thru Office Managers
Thru Division Managers

In response to several AFS-1 Special Project recommendations a new prototype Dynamic Observation Report (DOR) surveillance reporting option will be available in ATOS automation on February 9, 2001. This new DOR does NOT replace existing policies for reporting EPI or SAI surveillance activities. The objective of the DOR is to provide inspectors the ability to:

1. Record single-activity "unplanned observations" that are unrelated to the ATOS system element being inspected.

2. Report "unplanned observations" where there is not an ATOS element that addresses the unique situation.

3. Report observations that are related to the system element being inspected but are not covered by the Data Collection Tool questions.

4. Report observations on specific inspection events as directed by Handbook Bulletin or other National directive.

5. The DOR will also allow Principal Inspectors to request/assign unplanned surveillance, i.e., (not included in the CSP) activities by CMT inspectors, with instructions to inspect and report on specific areas of immediate concern outside the normal re-targeting.

Inspectors may use the DOR to record an 'unplanned' observation on any ATOS air carrier, not just their assigned carrier. The DOR provides two reporting options. The first provides an option to call up the performance measures/questions related to a selected ATOS EPI element. The inspector need only respond to those questions that apply to the observation that was made. The second option, consists of common data fields and a text block for the inspector to describe what they observed and what actions they took as a result of the observation. Data Quality Guidelines are applicable to both reporting options.

When an inspector saves a DOR it is immediately available to Principal Inspectors, ORAs, Managers, and Supervisors of the air carrier being reported regardless of that individual's technical discipline. It also goes to the DEPM of the observed air carrier for evaluation using the existing policy and procedures for EPIs. DORs are then saved in the ATOS data repository and will be available to query along with EPI and SAI data.

The "ATOS Automation User Guide", Chapter 5- provides detailed instructions for reporting DORs. It is available in the News and Documentation Section of ATOS Automation. Any specific questions not addressed in the "ATOS automation User Guide" should be directed to the ATOS Automation Help Desk 1-888-482-2867.

Again the DOR is not a substitution for the planned and targeted EPIs that are in the CSP nor is it intended for routine use by CMT members to record surveillance activities outside the CSP. CMO/CHDO/CMO managers, to assure its proper use, should closely monitor the use of the DOR. The ATOS CMO will be evaluating the prototype DOR over the next three months to determine its effectiveness in meeting the objectives mentioned above and making permanent policy changes based upon this evaluation.

This prototype evaluation of the DOR has been coordinated with the Professional Airways System Specialists (PASS).

/s/

Larry Youngblut

Figure 7-1. Memo Regarding "No" Responses to Data Collection Tool Questions.

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Air Transportation Oversight System (ATOS)
Certificate Management Office (CMO)
45005 Aviation Drive, Suite 203B
Dulles, VA 20166

Subject: INFORMATION: ***"No" Responses to Data Collection Tool Questions*** Date: 4/16/01

From: Manager, ATOS Certificate Management Office (CMO) :

To: Certificate Management Team (CMT) Members
Thru: Principal Inspectors, Office Managers, Division Managers

The purpose of this memorandum is to clarify the two instances that require inspectors to record and track an action taken as a result of a "no" response to an SAI or EPI question. Both of these instances are discussed below. All other "no" responses need to be evaluated by the Principal Inspector to determine if an action is required and if an action is required what that action should be.

Immediate Emergency Action

If the observation that resulted in a "no" response is an unsafe condition that would result in a possible accident or incident, or if a violation of the regulations is about to occur, the inspector should intervene by bringing the observed condition to the attention of appropriate air carrier personnel. The inspector should record what immediate action they took and what follow-up is required in the "reporting inspector action taken block" within the reporting software program. They should also promptly telephone the PI and convey the information. If the action involved an enforcement investigation, it would be tracked in the X7XX PTRS series. The EIR number and the PTRS record identification number should be referenced in the "inspector action taken block" and activity report closed as final.

Timely Action

If the observation that resulted in a "no" response is a performance measure, written procedure, control, or record that is required by the Specific Regulatory Requirement (SRR) reference linked to the question, the inspector should coordinate with the PI and document the action taken in the "inspector action taken block." An investigation may be required to determine if the air carrier conducted the process, program, or operation in violation of the SRR. These actions would be tracked in the appropriate PTRS series and referenced in the "inspector action taken block" as described in the preceding paragraph. The ATOS activity report should be closed as final.

All Other "No" Responses

If the observation that resulted in a "no" response relates to a system attribute that is not required by regulation, the inspector should enter a "no" response and include all appropriate data (who, what, when, where, how, etc) in the explanation field. The inspector should not enter any information in the "inspector action taken block" because the PI must determine any action required for these "no" responses. The PI, with assistance of the analyst, should evaluate these "no" responses to determine any action. This can be done using a periodic query of all "no" responses. Additional automation features will be implemented by June that provide PI's with a report of all "no" responses. The automation will provide an option for the PI to select standard text that states that "the "no" response will be considered during future inspection activity," or that "no immediate action is required", or provide the PI the ability to write a specific comment for the "no" response.

Summary

Inspectors should ensure that action has been taken on individual "no" responses that have an immediate safety concern or a possible regulatory (SRR) violation. PI's should periodically review these inspector actions. The PI should evaluate other "no" responses with the assistance of the analyst to determine if a significant trend, system flaw, or other hazard is indicated. This should be accomplished using the analyst report described in FAA Order 8400.10, Appendix 6, and may require the development of a formal action plan. In the next automation release, PI's will have the ability to provide comments for any "no" response. A formal risk management process, under development by the Continuous ATOS Development (CAD) Workgroup for Modules 7 and 8, will include procedures to link "no" responses to risk management and action planning.

Please forward a copy of this memorandum to all ATOS CMT members.

Sincerely,

Signed

Larry Youngblut

Figure 8-1. Sample Letter Requesting Participation on a System Analysis Team (SAT).

U.S. Department
of Transportation
Federal Aviation
Administration

[Date]

[Air Carrier Address]

Dear [Appropriate Official]

As part of the FAA's Air Transportation Oversight System (ATOS) 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 root cause(s) and solutions.

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

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

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

Sincerely,

[Signature and title of PI or Manager]

Figure 8-2. System Analysis Teams

The System Analysis Team (SAT) process is used to develop and execute collaborative action plans to ensure certificate holders manage their risks. Personnel from the FAA, the certificate holder, and other non-FAA entities work together to determine root causes and recommend possible solutions. The SAT process ensures that feedback concerning any actions taken is provided to applicable parties as part of the information sharing process. **The SAT process does not change any existing Flight Standards Enforcement Policies. SATs must be conducted in a manner that does not compromise FAA enforcement responsibilities.**

The Risk Management Plan (RMP) is the primary developing, reporting, and documenting tool in the SAT process. Throughout the implementation of the RMP the assigned CMT members perform periodic progress checks to monitor the completion and effectiveness of action items. Once the action items are completed, the SAT verifies that the overall action plan either eliminated the hazard or reduced the level of risk sufficiently so that no additional action is needed.

The following describes the tasks related to the SAT process:

a. **Convene a SAT.** The PI decides when it is appropriate to convene a Safety Analysis Team.

b. **Composition of SAT.** The PI or designated person should request input from the certificate holder regarding SAT composition. Depending on the nature of the system problem, the SAT may be comprised of:
- CMT Members
- Other FAA Personnel
- Airline representatives
- Manufacturers' representatives
- Other industry personnel

(1) **Request for Participation.** The PI or designated person contacts 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 manufacturer's representatives or other industry personnel.

(2) **Follow-up if initial request not accepted.** If the certificate holder does not accept the initial request to participate on the SAT, the PI should send a written request for participation to the appropriate certificate holder management official. A sample letter requesting participation on an SAT is provided in Figure 8-2, Sample Letter Requesting Participation on a System Analysis Team (SAT).

(3) **Actions if participation is declined.** If the identified personnel decline participation after a written request, the PI should notify their Regional

Division Manager, through their CHDO/CMO Manager. The Regional Division Manager and the CHDO/CMO Manager decide whether to:

- Contact a higher level of management of the declining organization, or
- Continue the SAT without the initially identified participants.

c. **Develop, implement and validate the results of the Risk Management Plan (RMP).** The policy and procedures for the development, implementation, and validation of the results of a RMP are described in Order 8400.10 Appendix 6, Chapter 8, Paragraph 804. Detailed instructions for using the RMP automation tool are provided in the Risk Management User Guide. The PI or designated person coordinates with other appropriate parties of the SAT to:

- Determine the approach that will be used
- Develop the RMP action items
- Coordinate performance of the action items.
- Determine if the RMP eliminated the hazard or reduced the risk level sufficiently so that no additional action is needed.

d. **Provide Feedback to Applicable Parties.** As part of the information sharing process, after the Risk Management Plan is complete, the PI or designated person communicates the results to all applicable parties.

Figure 9-1. ATOS FOIA Policies And Procedures.

POLICY: Requests for ATOS records made under the Freedom Of Information Act (FOIA) will be processed in accordance with FAA, DOT, and government-wide directives and guidance. All such requests and releasability determinations will therefore be processed under the authority and direction of the ATOS CMO.

BACKGROUND: FAA Order 1270.1 "Freedom of Information Act Program" (June 13, 2000) provides guidance governing the processing of requests for FAA records under FOIA. Order 1270.1 states, in part, that "Agency records possessed by the FAA are subject to the Act and must be made available to the public on request, unless specifically exempted or excluded by the FOIA. Reasonably segregable information will be provided from records which contain information that may be withheld. …[A]fter review by the program office releasable records may be made available for inspection and copying." Order 1270.1 also states that a record search and a releasability evaluation should be conducted by an individual who is familiar with the subject matter of the requested records.

There are nine exemptions under the FOIA which permit an agency to withhold records in whole or in part. "The appropriate program office must review each requested record to determine if the records or any reasonably segregable portion of the records fall within one of the nine exemptions." However, "[A]gency components should consider voluntarily releasing records which otherwise qualify for exemption if disclosure would not cause the agency harm that the relevant exemption sought to avoid." The FOIA favors disclosure and makes the withholding of even those records that clearly fall under the purview of one of the exemptions a discretionary act.

Regarding authority and responsibility, Order 1270.1 states that "[T]he heads of offices and services…are responsible for determining both the releasability of records under their purview and withholding records pursuant to properly applied exemptions or exclusions." The authority to release records may only be delegated to the division-head level. The authority to withhold a record in part or whole is vested in the heads of offices and services. This authority may not be delegated.

PROCEDURE: When a request for any ATOS-generated records is received by an ATOS CMO, the individual designated as the ATOS CMO FOIA Point of Contact (POC) will interface with the Local FOIA Coordinator for guidance and policy. The procedures in FAA Order 1270.1 shall be used in determining releasability of records. A copy of the response shall be provided to the ATOS CMO at Dulles, VA.

FIGURE 9-2. Memorandum Regarding Release of ATOS Documents.

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subj: ACTION: Protecting ATOS under the Freedom Of Information Act

Date: JUN 18 1998

From: Manager, AGC-110

To: Dave Hanley and Bob Carlisle
ATOS Workgroup Co-leaders

You requested our opinion concerning the protection of certain air carrier specific surveillance planning information from public release. You specifically requested our views on the protection of completed Air Carrier System Safety Analysis Tool (SSAT), the completed Air Carrier Assessment Tool (ACAT) and the completed Comprehensive Surveillance Work Pan (CSWP) of the Air Transportation Oversight System (ATOS). A member of my Branch met with your workgroup to discuss these issues and you provided us with a copy of the Improved Surveillance Planning Process Final Report.

Your basic concern was that the disclosure of the completed SSAT, ACAT or CSWP would allow carriers to anticipate and plan for agency surveillance, as opposed to consistently complying with the Federal Aviation Regulations, and thereby, undercut your ability to plan the surveillance of these carriers.

After reviewing all the information provided, it is our opinion that there is an argument to protect those particular elements pursuant to exemption 2 of the FOIA. 5 U.S.C. § 552(b)(2).[1] Exemption 2 protects predominately internal information where disclosure would significantly risk circumvention of a statute or agency regulation. The agency would need to show that release of the information would render the information "operationally useless" or compromise the utility of the program. In explaining how these elements would be at risk, you stated that if an air carrier knows its rating or score it will know whether they will be inspected annually or more frequently and what areas they could neglect or strengthen based on this information.[2]

[1] We note that there is an argument for protection under the FOIA. We cannot guarantee that a court would agree with our interpretation if subject to legal challenge.

[2] It is our understanding that ATOS differs from the Safety Performance Analysis System (SPAS) in this respect. It was never adequately explained to us from a factual/operational standpoint how release of specific SPAS information would risk circumvention of a statute or agency regulation.

There is also an argument that some of the information contained in these elements may also fall under exemption 5 protection. 5 U.S.C. § 552(b)(5). Exemption 5 protects "inter-agency or intra-agency memorandums or letters which would not be available to a party…in litigation with the agency." One recognized privilege under this exemption is the deliberative process privilege, which protects information that is both predecisional and deliberative in nature. However, all factual information must be released since that is not considered to be opinion or recommendation. You would need to review the elements and determine on a case-by-case basis whether certain information fell within exemption 5.

As we discussed, the best way to ensure protection of this information is to continue exploring the possibility of obtaining a legislative exemption for ATOS or certain aspects of ATOS.

/s/
LeAnne M. Faulkner