technical note technical note

Summary of Safety Management System Activity Status

April 2007

DOT/FAA/AR-TN07/10

U.S. Department of Transportation
Federal Aviation Administration

NOTICE

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16. Abstract

This technical note presents a review of the Safety Management System (SMS) Draft Standard, v.9, produced by the Joint Planning and Development Office (JPDO) working group. This review shows the concerns about how useful and effective the JPDO draft standard appears to be with respect to implementing SMS requirements by regulated entities such as airlines, repair stations, and manufacturers.

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LIST OF ACRONYMS

AFS	Flight Standards Service
ATOS	Air Transportation Oversight System
AVS	FAA Associate Administrator for Aviation Safety
CAA	Civil Aviation Authority
CFR	Code of Federal Regulations
FAA	Federal Aviation Administration
ICAO	International Civil Aviation Organization
IEP	Internal Evaluation Program
ISO	International Organization for Standardization
JPDO	Joint Planning and Development Office
SMS	Safety Management System

EXECUTIVE SUMMARY

This report presents a review of the Safety Management System (SMS) Draft Standard, v.9, produced by the Joint Planning and Development Office (JPDO) working group. This review shows the concerns about how useful and effective the JPDO draft standard appears to be with respect to implementing SMS requirements by regulated entities such as airlines, repair stations, and manufacturers.

In particular, this review examines how the draft standard aligns with the SMS standards implemented by other countries' regulatory authorities and airlines, with International Organization for Standardization standards, or with International Civil Aviation Organization (ICAO) standards. This review also analyzes whether there are sufficient provisions in current regulations for the Federal Aviation Administration (FAA) to require SMS implementation or whether regulatory changes are needed. In particular, several sections of the Federal Aviation Act were analyzed and appear to support the content of the JPDO draft SMS standards because the FAA Administrator is charged with promoting safety and reducing and eliminating accidents. There are also several existing regulations that may be used to justify the imposition of SMS implementation requirements.

ICAO safety oversight documents do not specifically describe a requirement for an SMS. However, they do discuss the desirability of a balanced safety oversight system in which both the state and aviation sector share a joint responsibility for safety using a management systems approach. It is also possible that ICAO may include an SMS requirement in an upcoming change to ICAO Annex 6. This may, in turn, drive the FAA to align itself with those requirements.

Finally, the report presents several additional issues related to SMS implementation, operation, and oversight. These include how to measure a safety culture, the incorporation of current Internal Evaluation Program advisory material, and the role of the FAA's Air Transportation Oversight System in SMS implementation.

INTRODUCTION

PURPOSE.

This report presents a review of the Safety Management System (SMS) Draft Standard, v.9, produced by a working group of the Joint Planning and Development Office (JPDO). The immediate concerns that the review support are related to how useful and effective the JPDO draft standard appears to be with respect to implementing SMS requirements for the entities regulated by the office of the Federal Aviation Administration (FAA) Associate Administrator for Aviation Safety (AVS). The standard in its final version will provide the standards for required SMS implementation by those regulated entities, e.g., airlines, repair stations, manufacturers, etc.

BACKGROUND.

In reviewing the draft standard, the following issues were explored:

- Whether the draft standard aligns closely with the SMS standards implemented by the Civil Aviation Authority (CAA) and airlines of other countries, according to data gathered from those countries earlier.

- Whether the draft standard elements align in general with the general management system concepts of International Organization for Standardization (ISO) 9000 and ISO 14000.

- How the draft standard relates to the current and developing International Civil Aviation Organization (ICAO) standards and recommended practices related to air operator and to its corresponding regulatory agency.

- Whether there is sufficient language in the current regulations for the FAA to be able to require SMS implementation through policy mandate rather than regulatory change.

- A brief identification of other considerations requiring further exploration for SMS implementation.

ALIGNMENT WITH OTHER SYSTEMS/STANDARDS

ALIGNMENT WITH THE SMS REQUIREMENTS OF OTHER COUNTRIES.

A report was previously prepared comparing the requirements of several other countries' SMS frameworks for a number of common elements. That comparison document was updated to include the requirements in the JPDO draft standard and is included in this report as appendix B. The updated comparison report reflects a commonality with the other system requirements shown.

ALIGNMENT WITH THE GENERAL MANAGEMENT CONCEPTS OF ISO 9000 AND ISO 14000.

A report was previously prepared comparing general management system concepts of ISO 9000 and the other countries' SMS frameworks as noted above. That comparison document was updated to include ISO 14000 and the pertinent elements of the JPDO draft standard and is included in this report as appendix A. Again, there is fundamental alignment among the general management system concepts shown.

RELATIONSHIP OF THE JPDO DRAFT STANDARD TO CURRENT AND DEVELOPING ICAO DOCUMENTS

The current ICAO Doc 9734, "Safety Oversight Manual, Part A: The Establishment and Management of a State's Safety Oversight System," outlines the duties and responsibilities of ICAO Contracting States with respect to aviation safety oversight. The document discusses general and specific obligations of contracting states, including the specific obligations of a state of aircraft registry and a state having issued a certificate to an air operator.

While the document does not specifically describe a requirement for the state or an air operator to have an SMS in place, there is discussion of the desirability of having a balanced safety oversight system, a system in which both the state and the aviation community share responsibility for the safe, regular, and efficient conduct of civil aviation activities. Furthermore, according to ICAO Doc 9734, while a state must retain control of important inspection functions, which cannot be delegated, the aviation industry has the overall responsibility for preserving safe, regular, and efficient aircraft operations and maintenance, aviation personnel training, and aircraft and aviation equipment manufacture.

Although SMS, per se, is not addressed in the document, the document does contain the following statement: "Crucial to the confidence that the CAA may place in organizations and to the associated freedom and flexibility it can give is that the organizations establish an adequate quality system which must be reviewed and approved by the CAA." This statement emphasizes the importance of a management systems approach for fulfilling the broad safety obligations of a regulated entity. It seems clear that the JPDO draft standard, while not fulfilling a requirement existing under current ICAO guidance, can be a helpful framework for fulfilling the intent of a systematic approach to safety oversight, from the standpoint of both the regulator and regulated, as described in Doc 9734.

In October 2005, ICAO issued a State letter transmitting a proposal to amend Annex 6, Parts I and III, "to harmonize provisions regarding safety management." As described in the State letter, the proposal defines two concepts: safety programs, aimed at states, and safety management systems, aimed at aircraft operators, maintenance organizations, etc.

As further described in the State letter, the term safety management is used to convey the notion that managing safety is a managerial process and, to reinforce the notion, the proposal includes a provision for an organization to establish lines of safety accountability throughout the organization, as well as at the senior management level. The proposal imposes upon states the

responsibility to establish a safety program and, as a part of the program, the states must require operators, maintenance organizations, and service providers to implement an SMS. The proposal further requires states to establish an acceptable level of safety for the activities under consideration.

From a content standpoint, it seems clear that the JPDO draft SMS standard will meet the intent and letter of the content requirements of the proposed revision to Annex 6. Two issues will need further clarification.

- The establishment and definition of an acceptable level of safety is not clearly addressed in the draft and will need further consideration.

- The specific mechanism for establishing a requirement for regulated, certificated entities will need to be established to the satisfaction of the ICAO Annex 6 requirements when they are final.

RELATIONSHIP OF THE JPDO DRAFT STANDARD TO THE MANDATED RESPONSIBILITIES OF TITLE 49 CHAPTER 447

Several sections of the Federal Aviation Act outline mandated and allowed actions assigned to the Administrator of the FAA. Some of those are reproduced, in part, as follows:

> "Sec. 44701. General requirements
>
> (a) Promoting Safety-- The Administrator of the Federal Aviation Administration shall promote safe flight of civil aircraft in air commerce by prescribing—
>
> (1) minimum standards required in the interest of safety for appliances and for the design, material, construction, quality of work, and performance of aircraft, aircraft engines, and propellers;
>
> (2) regulations and minimum standards in the interest of safety for—
>
> (A) inspecting, servicing, and overhauling aircraft,
>
> (B) equipment and facilities for, and the timing and manner of, the inspecting, servicing, and overhauling; and
>
> (C) a qualified private person, instead of an officer or employee of the Administration, to examine and report on the inspecting, servicing, and overhauling;
>
> (3) regulations required in the interest of safety for the reserve supply of aircraft, aircraft engines, propellers, appliances, and aircraft fuel

and oil, including the reserve supply of fuel and oil carried in flight;

(4) regulations in the interest of safety for the maximum hours or periods of service of airmen and other employees of air carriers; and

(5) regulations and minimum standards for other practices, methods, and procedure the Administrator finds necessary for safety in air commerce and national security.

(b) Prescribing Minimum Safety Standards-- The Administrator may prescribe minimum safety standards for—

(1) an air carrier to whom a certificate is issued under section 44705 of this title; and

(2) operating an airport serving any passenger operation of air carrier aircraft designed for at least 31 passenger seats.

(c) Reducing and Eliminating Accidents.--The Administrator shall carry out this chapter in a way that best tends to reduce or eliminate the possibility or recurrence of accidents in air transportation. However, the Administrator is not required to give preference either to air transportation or to other air commerce in carrying out this chapter.

(d) Considerations and Classification of Regulations and Standards.--When prescribing a regulation or standard under subsection (a) or (b) of this section or any of sections 44702-44716 of this title, the Administrator shall—

(1) consider—

(A) the duty of an air carrier to provide service with the highest possible degree of safety in the public interest; and

(B) differences between air transportation and other air commerce; and

(2) classify a regulation or standard appropriate to the differences between air transportation and other air commerce."

It seems clear, again, that the content of the JPDO draft SMS standard supports the literal mandates described in the material reproduced above with respect to the Administrator's charge to promote safety and reduce and eliminate accidents. What is not as clear, it seems, is whether

the Act also provides the mechanism to impose the minimum safety standards the Administrator shall or may prescribe. Such a question must be determined through a legal interpretation by the FAA Chief Counsel.

IS THERE A REGULATORY BASIS FOR A POLICY MANDATE TO REQUIRE SMS IMPLEMENTATION?

It has been suggested that the FAA has the ability to impose the requirement for entities regulated by the AVS to implement an SMS based on current regulations in place. That question will not be answered here; it will require a formal legal interpretation. This section will outline some regulatory provisions as possible bases for being able to impose the requirement in that way based on current regulations.

Title 14 Code of Federal Regulations (CFR) §119.39, "Issuing or Denying a Certificate," contains two provisions that address findings of the Administrator in support of issuing or denying a certificate. In §119.39(a)(3), the Administrator must find that the applicant "Is properly and adequately equipped in accordance with the requirements of this chapter and is able to conduct a safe operation under appropriate provisions of part 121 or part 135 of this chapter and operations specifications issued under this part." In §119.39(b)(1), the Administrator may find that "The applicant is not properly or adequately equipped or is not able to conduct safe operations under this subchapter."

14 CFR 119.41, "Amending a Certificate," contains the following provisions:

> "(a) The Administrator may amend any certificate issued under this part if –
>
> (1) The Administrator determines, under 49 U.S.C. 44709 and part 13 of this chapter, that safety in air commerce and the public interest requires the amendment; or
>
> (2) The certificate holder applies for the amendment and the certificate-holding district office determines that safety in air commerce and the public interest allows the amendment."

14 CFR 119.49, "Contents of Operations Specifications," section (a)(13) contains the provision that in addition to the specific items listed, the applicant may be required to include "Any other item the Administrator determines is necessary."

14 CFR 119.51, "Amending Operations Specifications," states, in part,

> "(a) The Administrator may amend any operations specifications issued under this part if –
>
> (1) The Administrator determines that safety in air commerce and the public interest require the amendment."

The regulatory sections cited above are not an exhaustive list of possibilities, but they do provide some examples for consideration. At face value, they would seem to provide by their word structure a strong basis, in some cases, for the Administrator to be able to impose a wide variety of requirements on an air operator without further regulatory development.

There would seem to be some caution in order, as well. For example, when looking at the history of invoking the regulatory sections cited, they are often used to impose restrictions in the face of urgent or immediate, more or less negative developments seen as threats to the public safety if allowed to continue. To use one or another of the same regulations to attempt to impose a requirement (SMS) that can only be seen as an incremental safety enhancement, and not as a negative reaction consistent with past practice, when the system may be substantially in place already, could certainly send a mixed message and result in outright rejection of the change to a formal SMS.

One additional comment can be offered with respect to the regulation 14 CFR Part 145, "Repair Stations." The language of most of the regulation is much more consistent with the management system approach to operating the repair station than is true for 14 CFR Parts 121 and 135 regulations, albeit with the emphasis on a quality system. Perhaps a more rigorous analysis of 14 CFR Part 145 may provide some additional insight for how SMS implementation might be required without additional regulatory development, though the desirable approach would seem to be a consistent approach across all regulations involved.

One other development may make the question easier to answer, and perhaps irrelevant. If the pending change to ICAO Annex 6 clearly results in a requirement for a regulation to implement SMS for certificate holders, it would be difficult to simply file "a difference" to let the world know that the U.S. does not conform to the ICAO standard. The sensitivity of the SMS idea and the visibility of the issue could well result in other countries attempting to restrict U.S. operators' international operations based on that nonconformance.

OTHER ISSUES RELATED TO SMS IMPLEMENTATION, OPERATION, AND OVERSIGHT

Once the SMS standard is agreed upon and is ready to be further developed into a standard for Flight Standards Service (AFS)-regulated entities, there are several questions that need to be addressed as implementation guidance is developed for both the operational and oversight elements of an implemented SMS. Some of the areas are:

- Measuring Safety Culture—The draft standard addresses safety culture, and the AFS standard will need to, as well. How that is to be addressed will need to be developed from both the operational and oversight aspects.

- Incorporating the current Internal Evaluation Program (IEP) advisory material—The draft standard addresses internal evaluation, and there would seem to be good opportunity to incorporate current IEP guidance and best practices into the AFS standard, again for both operational and oversight considerations.

- The role of Air Transportation Oversight System (ATOS) elements in the AFS SMS—ATOS has been an oversight function. Although the air carriers that have been subject to the ATOS oversight approach certainly have adapted internal processes to that oversight to one degree or another, there has been no regulatory requirement to do any particular change to accommodate the ATOS oversight processes. The role of the experience of ATOS in implementing SMS in the AFS community must be carefully developed.

APPENDIX A—AVIATION QUALITY STANDARDS CROSS-REFERENCE TABLE

Table A-1. Aviation Quality Standards Cross-Reference Table

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Management Responsibility	4.4.1: Structure and response-bility.	TP 13739 E: Introduction to Safety Management Systems Company senior management must make a solid commitment by devoting sufficient time, resources and attention to safety as a management issue.	CAP 712: Safety Management Systems for Commercial Air Transport Operations A demonstrable Board-level commitment to an effective formal Safety management System must exist.	4.4: Top management shall have ultimate responsibility for SMS.	4.1: Who is responsible for product or service quality and supplier quality system effectiveness?		5.1: Top management is responsible to develop, implement and continually improve the quality management system.			
Quality Policy	4.2: Environ-mental policy.			4.3: Quality Policy in support of safety policy.	4.1.1: Define and document policy; ensure it is understood, implemented and maintained.		4.2.1: The quality management system documentation shall include statements of quality policy and quality objectives.			

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Organization		The organizational structures and activities that make up a safety management system are formed throughout an organization. The system must be integrated throughout the establishment, which is achieved by the implementation and continuing support of a coherent safety policy which leads to well designed procedures.	A fully-fledged Safety Management System is a formalized, company-wide system. Established at the corporate level, the SMS then devolves out into the individual departments of the company.	4.4: Defines organizational structure and responsibilities.	4.1.2: Define and document responsibility, authority and interrelation of personnel who manage, perform and verify work; identify and assign resources and management representative.	4.1.2.3: The Management representative shall have authority and organizational freedom to resolve matters pertaining to quality. 4.1.2.4: Suppliers have a quality assurance activity performed by an individual process performer (e.g., operator, buyer, planner) shall have procedures that define the specific tasks and responsibilities that are authorized and the corresponding requirements and training necessary to perform those tasks.	5.5.1: Top management shall ensure that responsibilities and authorities are defined and communicated within the organization.	3.1: Contractor shall prescribe effective management of quality; responsibilities and authorities to be well-defined; organizational freedom shall be provided personnel performing quality functions to allow them to identify and evaluate problems, and to initiate, recommend and provide solutions.	4.1.2.3: The Management representative shall have authority and organizational freedom to resolve matters pertaining to quality. 4.1.2.4: Suppliers have a quality assurance activity performed by an individual process performer (e.g., operator, buyer, planner) shall have procedures that define the specific tasks and responsibilities that are authorized and the corresponding requirements and training necessary to	

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									perform those tasks.	
Management Review	4.6: Manage-ment review.	Senior management must develop and communicate safety policy that allocates responsibilities and holds people accountable for meeting safety performance goals.	Every level of management must be given safety a safety accountability. The contribution of the staff at and below supervisor level must be emphasized.	6.7: Top management will conduct regular reviews of the SMS.	4.1.3: Periodic review for suitability and effectiveness.		5.6.1: Top management shall review the quality management system, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness.	3.1: Regularly review status and adequacy of the quality program.		
Quality System					4.2: Does the supplier's quality system support that he will deliver what he says he will, and clarify how he makes sure that he does what he says?					
General					4.2.1: Prepare Quality Manual which establishes documents and maintains the quality system.	4.2.1: Other Quality System requirements imposed by the applicable Regulatory Authorities shall be included or referenced in the Quality	4.2.2: The organization shall establish and maintain a quality manual that includes scope, procedures and interaction between the	1.3: Requires an effective and economical quality program, planned and developed in consonance with the contractor's other	4.2.1: Other Quality System requirements imposed by the applicable Regulatory Authorities shall be included or	1. Quality System and Quality Manual: distributor shall have an established quality system, described in detail in the quality manual, adequate to assure

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						System documentation.	quality management processes.	administrative and technical programs. 3.1: Effective management for quality shall be clearly prescribed by the contractor. Hid personnel shall have well-defined responsibility, authority and organizational freedom to identify and provide solutions for quality problems. Management shall regularly review status and adequacy of the quality program.	referenced in the Quality System documen-tation.	a quality product that complies with customer specification.
Quality System Procedures					4.2.2: Document and implement quality system procedures.	4.2.2c: Ensure that quality system procedures are readily accessible to personnel who are responsible for performing	4.2.2: The quality manual includes procedures established for the quality management system.	3.3: Document all work affecting the quality of the product in clear and complete instructions of a type appropriate to the	4.2.2c: Ensure that quality system procedures are readily accessible to personnel who are responsible	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

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						work in conformance to requirements, and to customer and/or regulatory authorities' representatives.		circumstances. 3.4: Maintain and use records essential to the economic and effective operation of the quality system.	for performing work in conformance to requirements, and to customer and/or regulatory authorities' representatives.	
Quality Planning					4.2.3: Implement quality planning; define and document how quality requirements will be met.	4.2.3b: The identification and acquisition of any controls, processes, equipments (including inspection and test equipment); fixtures, resources and skills that may be needed to achieve the required quality; the design, manufacture, and use of tooling so that variable measurements can be taken, particularly for key characteristics.	4.2.1: The quality management system must include documents needed to ensure effective planning, operation and control of its processes.	3.2: Conduct review of contract requirements to identify and provide for special controls, processes, test equipment, fixtures, tooling and skills required to assure product quality and to assure compatibility of manufacturing, inspection, testing and documentation.	4.2.3b: The identification and acquisition of any controls, processes, equipments (including inspection and test equipment); fixtures, resources and skills that may be needed to achieve the required quality; the design, manufacture, and use of tooling so that variable measurements can be taken,	C2: Acknowledge changes to and receive approval for changes to the quality system.

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ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						4.2.3f: The identification of suitable verification at appropriate stages in the realization of product; the identification of in-process verification points when adequate verification of conformance cannot be performed at a later stage of realization. 4.2.3i: The identification and selection of subcontractors. 4.2.3j: The establishment of appropriate process controls and development of control plans where key characteristics have been identified. 4.2.3k: The identification of			particularly for key character-istics. 4.2.3f: The identification of suitable verification at appropriate stages in the realization of product; the identification of in-process verification points when adequate verification of conformance cannot be performed at a later stage of realization. 4.2.3i: The identification and selection of sub-contractors. 4.2.3j: The establishment of appropriate process controls and development	

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						material processes and services to support operation and maintenance of the product.			of control plans where key characteristics have been identified. 4.2.3k: The identification of material processes and services to support operation and maintenance of the product.	
Contract Review					4.3: Does the supplier's quality system ensure that the customer will receive what his marketing and sales sold the customer?					
General					4.3.1: Document and coordinate contract review activities.	4.3.1: The supplier shall also establish and maintain documented procedures for tender review and for the coordination of these activities.	7.2.2: The organization shall review requirements related to the product, including contracts or order requirements.	3.2: Conduct review of contract requirements to identify and provide for special controls, processes, test equipment, fixtures, tooling and skills	4.3.1: The supplier shall also establish and maintain documented procedures for tender review and for the coordination of these activities.	

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								required to assure product quality and to assure compatibility of manufacturing, inspection, testing and documentation.		
Review					4.3.2: Review contract to ensure alignment of customer expectations and supplier intent.	4.3.2d: Risk associated with new technology and/or short delivery time scale has been evaluated.	7.2.2: The organization review must ensure that product requirements are defined.		4.3.2d: Risk associated with new technology and/or short delivery time scale has been evaluated.	
Amendment to Contract					4.3.3: Identify contract change process.	4.3.3: Contract review requirements shall also apply to contract amendment.	7.2.3: The organization shall determine and implement effective arrangements for communicating with customers in relation to inquires, contract or order handling, including amendments.		4.3.3: Contract review requirements shall also apply to contract amendment.	
Records					4.3.4: Maintain record of contract reviews.					

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Design Control					4.4: Does the design of product ensure that it does what the supplier says, and clarify how are changes controlled?					
General					4.4.1: Establish and maintain documented procedures to control and verify the product's design.	4.4.1: The responsibilities and authorities for the approval of the design data shall be defined. When the supplier subcontracts design or development activities, the supplier shall control the subcontractor activity consistent with the requirements of paragraph 4.4.	7.3.1: The organization shall plan and control the design and development of products.	4.1: Maintain adequacy, completeness and currency of design drawings and specifications for their engineering adequacy.	4.4.1: The responsi-bilities and authorities for the approval of the design data shall be defined. When the supplier subcontracts design or development activities, the supplier shall control the subcontractor activity consistent with the requirements of paragraph 4.4.	
Design and Development Planning					4.4.2: Prepare plans for design and development activities; assign appropriate	4.4.2.1: Design and Development Management Planning: The supplier shall	7.3.1: The organization shall determine the design and development stages.		4.4.2.1: Design and Development Management Planning: The supplier shall	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					responsibility to qualified personnel.	plan the different phases used to carry out the design and development, in respect of the organization, task sequence, mandatory steps, significant stages and method of configuration control. The supplier shall give consideration to the following activities as appropriate: structure the design effort into significant elements according to the complexity, for each element analyze the tasks and the necessary resources for its design and development. (This analysis shall consider an identified responsible			plan the different phases used to carry out the design and development, in respect of the organization, task sequence, mandatory steps, significant stages and method of configuration control. The supplier shall give consideration to the following activities as appropriate: structure the design effort into significant elements according to the complexity, for each element analyze the tasks and the necessary resources for	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						person, design content, planning constraints, and performance conditions). 4.4.2.2: Reliability, Maintainability, Safety: The different design and development tasks to be carried out shall be defined according to specified safety or functional objectives of the product in accordance with customer and/or regulatory authority requirements.			its design and development. (This analysis shall consider an identified responsible person, design content, planning constraints, and performance conditions). 4.4.2.2: Reliability, Maintainability, Safety: The different design and development tasks to be carried out shall be defined according to specified safety or functional objectives of the product in accordance with customer and/or regulatory authority requirements.	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Organizational and Technical Interfaces	Introduc-tion, para.3.			4.4; 8.5: Organizational structure and responsibilities; senior management requirement to promote the growth of a positive safety culture.	4.4.3: Define organizational and technical interfaces which provide design input; document and periodically review input information.		7.3.1: The organizational shall manage the interfaces between different groups involved in design and development.			
Design Input					4.4.4: Identify and document design input; periodically review selection criteria for adequacy; resolve conflicts.	4.4.4: The input data to the design shall be defined and documented in terms of functional requirements. In the case of a product requiring design and development planning the supplier shall establish the input data specific to each element and shall review to ensure consistency with requirements.	7.3.2: Inputs relating to product requirements shall be determined and records maintained.		4.4.4: The input data to the design shall be defined and documented in terms of functional requirements. In the case of a product requiring design and development planning the supplier shall establish the input data specific to each element and shall review to ensure consistency with requirements.	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Design Output					4.4.5: Document design output and review before release so that it can be verified against design input requirements.	4.4.5: All pertinent data required to allow the product to be identified, manufactured, inspected, used and maintained shall be defined by the supplier e.g.: drawings, parts lists, specifications, a listing of those drawings, parts lists, specifications necessary to define the configuration and the design features of the product, information on material, processes, type of manufacturing and assembly of the product necessary to ensure the conformity of the product.	7.3.3: The outputs of design and development shall be in a form that enables verification against design and development inputs.		4.4.5: All pertinent data required to allow the product to be identified, manufactured, inspected, used and maintained shall be defined by the supplier e.g.: drawings, parts lists, specifi-cations, a listing of those drawings, parts lists, specifications necessary to define the configura-tion and the design features of the product, information on material, processes, type of manufacturing and assembly of the product necessary to ensure the	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
									conformity of the product.	
Design Review					4.4.6: Conduct formal reviews of design results; maintain records of these reviews.	4.4.6: Consideration shall be given to: the validity of design in relation to the objectives of the design stage, actions which need to be taken in the event of any identified deviation, decision necessary for progression to the next stage.	7.3.4: Systematic reviews of design and development shall be performed according to planned arrangements.		4.4.6: Consideration shall be given to: the validity of design in relation to the objectives of the design stage, actions which need to be taken in the event of any identified deviation, decision necessary for progression to the next stage.	
Design Verification					4.4.7: Verify design stage outputs with design input requirements.		7.3.5: Verification must ensure the design and development outputs have met the design and development inputs.			
Design Validation					4.4.8: Validate product against defined user	4.4.8.1: Documentation of Design	7.3.6: Design and development		4.4.8.1: Document-ation of	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					requirements.	Verification and Validation: At the completion of development supplier shall ensure that reports, calculations, test results, etc. demonstrate that the product definition meets the specification requirements for all identified operational conditions and the product will function correctly. 4.4.8.2: Design Verification and Validation Testing: Where tests are necessary for verification and validation, these tests shall be planned, controlled, reviewed and documented to ensure and prove the following: test plans or specifications	validation must ensure the resulting product is capable of meeting the requirements for the specified application.		Design Verification and Validation: At the completion of development supplier shall ensure that reports, calculations, test results, etc. demonstrate that the product definition meets the specification requirements for all identified operational conditions and the product will function correctly. 4.4.8.2: Design Verification and Validation Testing: Where tests are necessary for verification and validation, these tests	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						identify the product being tested and the resources being used, define test objectives and conditions, parameters to be recorded, and relevant acceptance criteria, test procedures describe the method of operation, the performance of the test, and the recording of the results, the correct configuration standard of the product is submitted for the test, the requirements of the test plan and the test procedures are observed, the acceptance criteria are met.			shall be planned, controlled, reviewed and documented to ensure and prove the following: test plans or specifications identify the product being tested and the resources being used, define test objectives and conditions, parameters to be recorded, and relevant acceptance criteria, test procedures describe the method of operation, the performance of the test, and the recording of the results, the correct configu-	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
									ration standard of the product is submitted for the test, the requirements of the test plan and the test procedures are observed, the acceptance criteria are met.	
Design Changes					4.4.9: Document and review all design changes before implementation.	4.4.9: Design change approval: The supplier's design control shall provide for customer and/or regulatory authority approval of changes, when required by contract or regulatory requirement.	7.3.7: The changes shall be reviewed, verified and validated, as appropriate, and approved before implementation.	4.1: Assure complete compliance with contract requirements for proposing, approving and implementing engineering changes; monitor compliance with contractual engineering changes..	4.4.9: Design change approval: The supplier's design control shall provide for customer and/or regulatory authority approval of changes, when required by contract or regulatory requirement.	
Document and Data Control	4.4.5: Document control.			4.8: Records and records management requirements	4.5: Are key documents controlled in the supplier's quality system throughout					

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					design, manufacturing, and service?					
General					4.5.1: Establish and maintain procedures for control of documents and data relating to ISO 9000 requirements.		4.2.3: A documented procedure shall be established to ensure that changes and the current revision status of documents are identified and that relevant revisions are available at points of use.	3.4: Maintain and use records essential to the economic and effective operation of the quality system. 4.1: Assure complete compliance with contract requirements for proposing, approving and implementing engineering changes; monitor compliance with contractual engineering changes. {MIL-I: 3.2.4}: Contractor's inspection system shall assure that the latest applicable drawings, specifications and instructions required by the		13. Technical Data Control: when required, maintain technical data to ensure data is current and accessible. E7: Currency, ready accessibility, and applicability of data shall be ensured. C3: Certify that appropriate documentation is available at the business site.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
								contract, including authorized changes, are used for fabrication, inspection and testing. {MIL-I: 3.2.2}: Maintain adequate records of all inspections and tests.		
Document and Data Approval and Issue					4.5.2: Maintain master list of current revisions of documents; periodically review list; incorporate approval process.	4.5.2: When customer furnished digital data is used for design, production and/or inspection, the supplier shall establish system controls in accordance with customer requirements.	4.2.3: A documented procedure shall be established to ensure changes and the current revision status of documents are identified.		4.5.2: When customer furnished digital data is used for design, production and/or inspection, the supplier shall establish system controls in accordance with customer requirements.	
Document and Data Changes					4.5.3: Approve changes within the designated approval process.		4.2.3: A documented procedure shall be established to ensure documents are			

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000 approved prior to issue.	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Purchasing					4.6: Does the supplier's quality system make sure that bought parts/services are those specified, and that his suppliers are reliable?			5.1: Contractor's responsibilities include selection of qualified suppliers, timely transmission of design and quality requirements, evaluation of adequacy of procured items, and providing early feedback and correction of nonconfor-mance.		
General					4.6.1: Establish and maintain documented procedures to ensure conformance of purchased products to specified requirements.	4.6.1: The supplier shall be responsible for the quality of all products purchased from subcontractors, including customer-designated sources.	7.4.1: The organization shall ensure that purchased products conform to specific purchase requirements.	5.1: Assure that all supplies and services procured from suppliers conform to contract requirements, using, to the fullest extent, objective evidence of quality.	4.6.1: The supplier shall be responsible for the quality of all products purchased from sub-contractors, including customer-designated sources.	5. Procurement: distributor shall maintain a procurement system which insures that purchased materials conform to specified documentation requirements.
Evaluation of Subcontractors				6.3.2: Requirement to conduct regular	4.6.2: Evaluate and select subcontractors	4.6.2d: Ensure where required that both the	7.4.1: The organization shall evaluated	7.1: Right to conduct inspections at	4.6.2d: Ensure where required that	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
				audits of safety related functions, including any contractors used to accomplish the functions.	based on their ability to meet requirements; define type of control to be used over subcontractors; maintain quality records of acceptable subcontractors.	supplier and all subcontractors use customer-approved special process sources, 4.6.2e: Ensure that the organization having responsibility for approving subcontractor quality systems has the authority to disapprove the use of sources, 4.6.2f: Periodically review subcontractor performance. Records of these reviews shall be maintained and used as a basis for establishing the level of supplier controls to be implemented, 4.6.2g: Maintain procedures that define the necessary actions to take	and select suppliers based on their ability to supply products in accordance with the organization's requirements.	sources for supplies and services not manufactured or performed at contractor's facility.	both the supplier and all subcontractors use customer-approved special process sources, 4.6.2e: Ensure that the organization having responsibility for approving subcontractor quality systems has the authority to disapprove the use of sources, 4.6.2f: Periodically review subcontractor performance. Records of these reviews shall be maintained and used as a basis for establishing the level of supplier controls to be	

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ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						when dealing with subcontractors, which do not meet requirements. A list of approved subcontractors shall be maintained and shall specify the scope of approval.			implemented, 4.6.2g: Maintain procedures that define the necessary actions to take when dealing with sub-contractors, which do not meet requirements. A list of approved subcontractors shall be maintained and shall specify the scope of approval.	
Purchasing Data					4.6.3: Review and approve purchasing documents before their release; documents shall contain sufficient data.	4.6.3d: Design, test, examination, inspection and customer acceptance requirements and any related instructions and requirements; 4.6.3e: Right of access by the purchaser, their customer and regulatory	7.4.2: Purchasing information shall describe the product to be purchased, including requirements for approval of product, processes, and equipment.	5.2: Contractor shall require subcontractors to implement a quality effort which achieves control of the quality of the services/ supplies they provide.	4.6.3d: Design, test, examination, inspection and customer acceptance requirements and any related instructions and requirements; 4.6.3e: Right of access by the purchaser,	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						authorities to all facilities involved in the order and all applicable quality records; 4.6.3f: Requirements for test specimens (production method, number, storage conditions etc) for design approval, inspection, investigation or auditing; 4.6.3g: Requirements relative to the notification of anomalies, changes in definition and the approval of their processing; 4.6.3h: Requirements to flow down to sub tier suppliers the applicable requirements in the purchasing documents, including key			their customer and regulatory authorities to all facilities involved in the order and all applicable quality records; 4.6.3f: Requirements for test specimens (production method, number, storage conditions etc) for design approval, inspection, investigation or auditing; 4.6.3g: Requirements relative to the notification of anomalies, changes in definition and the approval of their processing; 4.6.3h: Requirements to flow down to sub tier suppliers the	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						characteristics where required.			applicable requirements in the purchasing documents, including key characteristics where required.	
Verification of Purchased Product					4.6.4: Verification of the purchased product shall be done as specified in the contract.	4.6.4: Verification of Purchased Product: The supplier shall implement procedures to verify purchased products. These may include: obtaining objective evidence of the quality of the product from subcontractors (e.g., accompanying documentation, certificate of conformity, test reports, statistical records, process control); inspection and audit at source; review of the	7.4.3: The organization shall establish and implement the inspection or other activities necessary to ensuring the purchased product meets specific requirements.		4.6.4: Verification of Purchased Product: The supplier shall implement procedures to verify purchased products. These may include: obtaining objective evidence of the quality of the product from subcontractors (e.g., accompanying document-ation, certificate of conformity, test reports, statistical records,	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						required documentation; inspection of products at delivery' delegation of verification to the subcontractor, or subcontractor certification. When delegation is used the supplier shall define the requirements for delegation and maintain a list of delegations. 4.6.4.1: Added. 4.6.4.2: Added.			process control); inspection and audit at source; review of the required documentation ; inspection of products at delivery' delegation of verification to the subcontractor, or subcontractor certification. When delegation is used the supplier shall define the requirements for delegation and maintain a list of delegations. 4.6.4.1: Added. 4.6.4.2: Added.	
Control of Customer-Supplied Product					4.7: How does the supplier protect, store, maintain, and fix, if necessary, materials					

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					provided by the customer?					
					4.7: Supplier establish and maintain documented procedures for the control of verification, storage and maintenance of customer-supplied product.		7.5.4: The organization shall identify, verify, protect, and safeguard customer property provided for use or incorporation into the product.	5.2: Contractor shall require subcontractors to implement a quality effort which achieves control of the quality of the services/supplies they provide. 7.2: Examine, inspect (initial and periodic), test, identify and protect, and verify quantity of Government-furnished material. If damaged or otherwise malfunctioning, determine and report probable cause for withholding material from use. For bailed Government property, establish procedures for		

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
								adequate storage, maintenance and inspection. {MIL-I: 3.6}: Examine, inspect (initial and periodic), test, identify and protect, and verify quantity of Government-furnished material. {MIL-I: 3.6.1}: If damaged or otherwise malfunctioning, determine and report probable cause and necessity for withholding material from use.		
Product Identification and Traceability					4.8: How does the supplier ensure that the customer's parts do not get mixed up with the supplier's parts, and that the parts are as specified, and					

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					correct for the customer's project?					
					4.8: Identify the product from receipt and during all stages of production, delivery and installation; traceability may be a specified requirement.	4.8: According to the level of traceability required by the contract, regulatory, or other established requirement, the supplier's system shall provide for: identification to be maintained throughout the product life; all the products manufactured from the same batch of raw material or from the same manufacturing batch to be traced, as well as the destination (delivery, scrap) of all products of the same batch. For an	7.5.5: The organization shall preserve the conformity of product during initial processing and delivery to the intended destination.		4.8: According to the level of traceability required by the contract, regulatory, or other established requirement, the supplier's system shall provide for: identification to be maintained throughout the product life; all the products manufactured from the same batch of raw material or from the same manufacturing batch to be traced, as well as the destination (delivery, scrap) of all products of the same	8.G. Part numbering: ensure that no part number ambiguity exists. 10. Certification and release of materials: provide customer with certification (Appendix A). E1: Receiving Inspection Procedures to trace procured materials and components to approved sources. E10: Shipped parts can be traced and recalled. E13: Redistribution of lots shall be documented. C4: Exercise accountability when copies are made for

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						assembly, the identity of its components and those of the next higher assembly to be traced; For a given product, a sequential record of its production (manufacture, assembly, inspection) to be retrieved. The supplier shall maintain the identification of the configuration of the product in order to identify any differences between the actual configuration and the agreed configuration.			batch. For an assembly, the identity of its components and those of the next higher assembly to be traced; For a given product, a sequential record of its production (manufac-ture, assembly, inspection) to be retrieved. The supplier shall maintain the identification of the configuration of the product in order to identify any differences between the actual configuration and the agreed configuration.	redistribution shipments, and approval tags are duplicated. C5 and C6: Ability to notify purchasers within 24 hours of shipped parts which do not conform to quality requirements, and provide corrective actions.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Process Control					4.9: What procedures does the supplier have in place to build the customer's product properly?					
					4.9: Identify and plan the production and installation and servicing processes which directly affect quality; ensure that these processes are carried out under controlled conditions; the process qualification process shall be specified; records shall be maintained for qualified processes, equipment and personnel.	4.9.1b: Due to length of data refer to section 1, page 19.	7.5.1: The organization shall plan and carry out production and service provisions under controlled conditions.	3.3: Document all work affecting the quality of the product in clear and complete instructions of a type appropriate to the circumstances. 6.2: Assure that all machining, wiring, batching, shaping, all production operations, and all processing and fabricating of any type must be completed under controlled conditions. {MIL-I: 3.2.1}: Inspection and testing shall be	4.9.1b: Due to length of data refer to section 1, page 19.	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
								prescribed by clear, complete and current instructions. {MIL-I: 3.4}: Procedures shall be an integral part of the inspection system when such inspections are a part of the specification or contract.		
Inspection And Testing					4.10: How does the supplier ensure that the customer gets what he ordered, and that it works as the supplier promised?					
General					4.10.1: Establish and maintain documented procedures for inspection and testing activities to verify that specified requirements for the product are being met; detail procedures in quality plan or	4.10.1: These procedures shall specify the resources and methods to be implemented, and methods of recording the results. These procedures shall include: identification of authorized personnel; limits	7.6: The organization shall determine the monitoring and measurements to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of	5.1: Contractor is responsible to assure that all supplies and services provided by suppliers conform to requirements. {MIL-I: 3.1}: Contractor shall provide and maintain an	4.10.1: These procedures shall specify the resources and methods to be implemented, and methods of recording the results. These procedures shall include: identification	2. Self-Audit/ Evaluation & Accreditation Programs: the distributor shall have a self-audit/evaluation program in place to ensure that the adopted quality system has been implemented. E8: Control of

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					documented procedures.	of authorization; training and qualification requirements Inspection documentation shall be maintained and controlled by the supplier. This may be part of the manufacturing documentation, but shall include: criteria for acceptance and rejection; where in the sequence inspection and testing operations are performed; documents recording inspection results; identification of production inspection instruments; documents associated with specific inspection instruments	product to determined requirements.	inspection system which will assure that all supplies and services submitted for acceptance conform to contract requirements whether manufactured or processed by the contractor, or procured from subcontractors or vendors. This system shall be documented and shall be available for review prior to start of production, and throughout the life of the contract. {MIL-I: 3.2.1}: Inspection and testing shall be prescribed by clear, complete and current instructions. {MIL-I: 3.10}:	of authorized personnel; limits of authorization; training and qualification requirements. Inspection documen-tation shall be maintained and controlled by the supplier. This may be part of the manufacturing documen-tation, but shall include: criteria for acceptance and rejection; where in the sequence inspection and testing operations are performed; documents recording inspection results; identification of production	issuance, usage, reissuance and accountability shall be ensured with inspection stamps.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						enabling them to be designed, produced, validated, controlled, used and maintained. When the supplier subcontracts inspection or test activities, the supplier shall control the subcontracted activity consistent with requirements of Section 4.6.		Alternate inspection procedures and inspection equipment may be used when such procedures and equipment provide, as a minimum, the quality assurance required in the contractual documents. {MIL-I: 3.13}: Contractor's inspection system and supplies generated by the system shall be subject to evaluation and verification inspection by the Government to determine its effectiveness in supporting the quality requirements established in the detail specification, drawings, and contract, and as	inspection instruments; documents associated with specific inspection instruments enabling them to be designed, produced, validated, controlled, used and maintained. When the supplier subcontracts inspection or test activities, the supplier shall control the subcontracted activity consistent with requirements of Section 4.6.	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
								prescribed in MIL-I-45208A.		
Receiving and Inspection					4.10.2: Establish and implement inspection or verification system for incoming product; for cases of urgent release, implement an immediate recall system in case nonconformity's are discovered.	4.10.2.4: When certification test reports are utilized to accept material, the supplier shall assure that data in said reports are acceptable per applicable specifications. The supplier shall periodically validate test reports.	7.5.1: The organization shall plan and carry out production and service provisions, including the implementation of release, delivery and post-delivery activities.	6.1: Materials and products shall be inspected upon receipt to extent necessary to assure conformance to technical requirements. Raw materials for use in fabrication or processing shall conform to applicable physical, chemical, and other technical requirements. Tested and approved material must be identified until its identity is obliterated by the processing. {MIL-I: 3.12}: Subcontracted or purchased supplies shall be inspected after receipt, as necessary, to	4.10.2.4: When certification test reports are utilized to accept material, the supplier shall assure that data in said reports are acceptable per applicable specifications. The supplier shall periodically validate test reports.	6. Receiving inspection: inspectors shall conduct a complete visual inspection of all incoming parts and materials.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
								assure conformance to contract requirements.		
In-Process Inspection and Testing					4.10.3: Inspect and test products as required by the quality plan or documented procedures; hold products for inspection unless positive-recall procedures are in place.		7.6: Where necessary to ensure valid results, measuring equipment shall be calibrated or verified at specific intervals.	6.2: Assure that all machining, wiring, batching, shaping, all production operations, and all processing and fabricating of any type must be completed under controlled conditions.		
Final Inspection and Testing					4.10.4: Carry out all final inspections and tests in accordance with the quality plan or documented procedures; all documented procedures to be completed and results available and authorized before product is released.		8.2.4: The organization shall monitor and measure the characteristics of the product to verify product requirements have been met. Product release and service delivery shall not proceed until the planned arrangements (see 7.1) have been	6.3: All completed products shall undergo final inspection and test to provide a measure of the overall quality of the completed product, and shall be performed, to a sufficient degree, so that it simulates product end use and functioning.		

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
							satisfactorily controlled.			
Inspection and Test Records					4.10.5: Establish and maintain records of product inspections and tests. No equivalent.	4.10.6: First Article Inspection: The supplier's system shall provide a process, as appropriate, for the inspection, verification, and documentation of the first production article. First Article Inspection documentation shall be retained (see 4.16) and shall include a list of the characteristics required by the design data and any required tolerances, the actual results,	8.2.4: Evidence of conformity with the acceptance criteria shall be maintained. Records shall indicate person(s) authorizing release of the product.	6.7: Maintain a positive system for identifying the inspection status of products. {MIL-I: 3.2.2}: Maintain adequate records of all inspections and tests. {MIL-I: 3.5}: Maintain a positive system for identifying the inspection status of supplies. Markings or tags shall be different than Government's inspection identification.	4.10.6: First Article Inspection: The supplier's system shall provide a process, as appropriate, for the inspection, verification, and document-ation of the first production article. First Article Inspection documentation shall be retained (see 4.16) and shall include a list of the characteristics required by the design	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						and when testing is required, the results of the tests. The First Article Inspection shall be updated to include production process changes or configuration changes.			data and any required tolerances, the actual results, and when testing is required, the results of the tests. The First Article Inspection shall be updated to include production process changes or configuration changes.	
Control of Inspection, Measuring, and Test Equipment					4.11: How does the supplier verify that test equipment is accurate?					
General					4.11.1: Establish and maintain documented procedures to control, calibrate and maintain inspection, measuring and	NOTE ADDED: Inspection, measuring and test equipment includes all types and devices used by any supplier or subcontractor personnel to	7.6: Measuring equipment shall be calibrated or verified a specified intervals, or prior to use, against measurement standards	4.2: Provide and maintain gages and other measuring and testing devices necessary to assure that supplies conform to the technical	NOTE ADDED: Inspection, measuring and test equipment includes all types and devices used by any supplier or	7. Measuring and Test Equipment: if required, test equipment shall be maintained under an effective calibration program.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					test equipment, hardware and software.	validate materials, products, processes or other inspection, measuring and test equipment. This includes test hardware, test software, automated test equipment (ATE) and plotters used to produce inspection data. It also includes personally owned equipment used for product acceptance. Responsibilities shall be defined regarding the control of inspection, measuring and test equipment, including those used by operators as well as, where appropriate, test devices and tools supplied by the customer.	traceable to international or national measurement standards. Records will be maintained.	requirements. Devices shall be calibrated against certified measurement standards. {MIL-I: 3.3}: Provide and maintain gages and other measuring and testing devices necessary to assure that supplies conform to the technical requirements.	subcontractor personnel to validate materials, products, processes or other inspection, measuring and test equipment. This includes test hardware, test software, automated test equipment (ATE) and plotters used to produce inspection data. It also includes personally owned equipment used for product acceptance. Respon-sibilities shall be defined regarding the control of inspection, measuring and test equipment, including	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
									those used by operators as well as, where appropriate, test devices and tools supplied by the customer.	
Control Procedure					4.11.2: Select appropriate inspection, measuring and test equipment; adjust selected equipment against certified equipment standards at prescribed intervals; define the calibration process; maintain calibration records validate previous inspections and tests; maintain adequate handling, preservation and storage of inspection, measuring and test equipment; safeguard facilities for	4.11.2b: Added: The supplier shall maintain a list of this equipment, including where appropriate, test devices and tolls supplied by the customer. 4.11.2f: Added: When the assessment indicates that the product may be nonconforming, disposition the non-conformance. 4.11.2j: Define the method for recall of measuring devices that require calibration (ISO 10012).	7.6: Measuring equipment shall be calibrated or verified a specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards. Records will be maintained.	4.2: Provide and maintain gages and other measuring and testing devices necessary to assure that supplies conform to technical requirements. Devices are to be calibrated against certified measurement standards to assure continued accuracy. Calibration shall conform to requirements of MIL-STD-45662. 4.3: When production jigs, fixtures, tooling masters, templates,	4.11.2b: Added: The supplier shall maintain a list of this equipment, including where appropriate, test devices and tolls supplied by the customer. 4.11.2f: Added: When the assessment indicates that the product may be non-conforming, disposition the non-conformance. 4.11.2j: Define the method for recall of measuring devices that	E3: Provide appropriate storage, usage and traceable calibration for measuring equipment.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					inspection, measuring and test equipment.			patterns and similar devices are used for inspection, they shall be proved for accuracy before release for use, and periodically proved accurate during use. 4.4: Contractor's gages, measuring and testing devices and personnel to operate them shall be made available for use when required to determine conformance with contract requirements. 4.5: When the need for precision measurements exceed the known state of the art, the contractor shall notify the Contracting Officer. {MIL-I: 3.3}: if production	require calibration (ISO 10012).	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
								tooling (e.g. jigs, fixtures, templates and patterns) is used as a media of inspection, such devices shall be proved for accuracy at established intervals. {MIL-I: 3.3}: Calibration of inspection equipment shall conform to requirements of MIL-STD-45662. {MIL-I: 3.3}: Contractor's measuring and testing equipment, and personnel to operate them when needed, shall be made available for use when required to determine conformance with contract requirements.		

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Inspection and Test Status					4.12: How does the customer know that his product was tested?					
					4.12: Identify the inspection and test status of product to indicate conformance or nonconform-ance of product with regard to inspections and tests performed.	4.12.1: Authorized Personnel: Records shall include inspection and test results.	8.2.4: Evidence of conformity with the acceptance criteria shall be maintained. Records shall indicate person(s) authorizing release of the product.	6.7: Maintain a positive system for identifying the inspection status of products. {MIL-I: 3.5}: Maintain a positive system for identifying the inspection status of supplies. Markings or tags shall be different than Government's inspection identification.	4.12.1: Authorized Personnel: Records shall include inspection and test results.	
Control of Nonconforming Product					4.13: Does the supplier have a procedure for fixing or disposing of products that do not work or fit as required?					
General					4.13.1: Establish and maintain documented procedures to	8.3: The organization shall ensure that products which do not conform	8.3: The organization shall ensure that products that do not conform to	6.5: Establish and maintain an effective and positive system for controlling	8.3: The organization shall ensure that products which do not	8.H. Non-conforming Materials: a closed-loop system shall exist

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					ensure that nonconforming product is not used or installed.	to product requirements are identified and controlled to prevent their unintended use or delivery.	product requirements are identified and controlled to prevent their unintended use or delivery.	nonconforming material. {MIL-I: 3.7}: Establish and maintain an effective and positive system for controlling nonconforming material, including procedures for the identification, segregation, presentation, and disposition of reworked and repaired supplies.	conform to product requirements are identified and controlled to prevent their unintended use or delivery.	to implement corrective action following detection of substandard or otherwise nonconforming parts.
Review and Disposition of Nonconforming Product					4.13.2: Disposition of nonconforming products shall only be approved by authorized personnel (alternatives include rework, accept, regrade or reject).	8.3: The organization shall deal with nonconforming product by taking action to eliminate the detected nonconformity, by authorizing its use, release or acceptance under concession by a relevant authority, and, where	8.3: The organization shall deal with nonconforming product by taking action to eliminate the detected nonconformity, by authorizing its use, release or acceptance under concession by a relevant authority, an, where	6.5: Repair and rework of nonconforming material shall conform to acceptable documented procedures. Costs and losses in connection with scrap and with rework necessary to reprocess nonconforming material to make them	8.3: The organization shall deal with non-conforming product by taking action to eliminate the detected non-conformity, by authorizing its use, release or acceptance under concession by a relevant	8.I. Scrapped Parts: a documented procedure shall be in place to mutilate scrapped parts. Records and documents shall be maintained on serialized scrapped parts. E4: Control of incoming discrepant material.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						applicable, by the customer, and by taking action to preclude its original intended use or\ application.	applicable, by the customer, and by taking action to preclude its original intended use or/application.	conform completely will be made available upon request. {MIL-I: 3.7}: Repair and rework of nonconforming material shall conform to acceptable documented procedures. All nonconforming supplies shall be positively identified to prevent use, shipment, and intermingling with conforming supplies.	authority, and, where applicable, by the customer, and by taking action to preclude its original intended use or/ application.	
Corrective and Preventive Action	4.5.2: Noncon-formance and corrective and preventive action.			6.6: The organization shall take timely corrective action to eliminate the cause of nonconformities in order to prevent recurrence.	4.14: If a problem occurs, how does the supplier ensure that it doesn't happen again?					
General					4.14.1: Establish and maintain	8.5.2: The organization shall take action	8.5.2: The organization shall take action		8.5.2: The organization shall take	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					documented procedures for implementing corrective and preventive action; implement and record changes to procedures.	to eliminate the cause of nonconformities in order to prevent recurrence.	to eliminate the cause of nonconformities in order to prevent recurrence.		action to eliminate the cause of nonconformities in order to prevent recurrence.	
Corrective Action					4.14.2: Document procedures for handling customer complaints, reports of non-conformity's, investigations relating to quality, and corrective action determination and after-action controls.	8.5.2: A documented procedure shall be established to define requirements for reviewing nonconformities (including customer complaints), determining the causes of non-conformities, determining and implementing action needed, etc.	8.5.2: A documented procedure shall be established to define requirements for reviewing nonconformities (including customer complaints), determining the causes of non-conformities, determining and implementing action needed, etc.	3.5: Promptly detect and correct conditions detrimental to quality, including defective supplies, services, facilities, technical data, standards or other elements of contract performance which may create excessive losses or costs. {MIL-I:3.2.3}: Take prompt action to correct assignable conditions which have or could result in presenting a supply or	8.5.2: A documented procedure shall be established to define requirements for reviewing nonconform-ities (including customer complaints), determining the causes of non-conformities, determining and implementing action needed, etc.	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
								service which does not conform to quality assurance provisions, required tests or inspections, or other inspections or tests required to substantiate product conformance.		
Preventive Action					4.14.3: Document procedures for use of appropriate sources of information which affect quality, preventive action determination, initiation and application of controls, and confirmation of management review.	8.5.3: The organization shall determine action to eliminate the causes of potential nonconformities in order to prevent their occurrence. Preventive actions shall be appropriate to the effects of the potential problems.	8.5.3: The organization shall determine action to eliminate the causes of potential nonconformities in order to prevent their occurrence. Preventive actions shall be appropriate to the effects of the potential problems.		8.5.3: The organization shall determine action to eliminate the causes of potential non-conformities in order to prevent their occurrence. Preventive actions shall be appropriate to the effects of the potential problems.	
Handling, Storage, Packaging,					4.15: How does the supplier ensure that the					

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Preservation, and Delivery					customer's product was built correctly, that it will be protected from damage during storage and delivery?					
General					4.15.1: Establish documented procedures for handling, storage, packaging, preservation, and delivery of product.	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	6.4: Provide for adequate work and inspection instructions for handling, storage, preservation, packaging, and shipping to protect the quality of products and prevent damage, loss, deterioration, degradation, or substitution of products.	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	
Handling					4.15.2: Provide methods of handling product that	7.5.5: The organization shall preserve the conformity	7.5.5: The organization shall preserve the conformity	6.4: Require and monitor the use of procedures to	7.5.5: The organization shall preserve the conformity	8.A. Material Handling: material shall be handled and

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					prevent damage or deterioration.	of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	prevent handling damage to articles.	of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	protected from damage and deterioration in an appropriate manner.
Storage					4.15.3: Use designated storage areas or stock rooms to prevent damage or deterioration of product.	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also		7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation	8.B. Batch/Lot Control: batch segregation shall be maintained for parts so identified by the manufacturer. 8.F. Storage of Parts: quality system shall assure that serviceable parts/components are adequately protected against the environment and damage. 9. Shelf life

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						apply to the constituent parts of a product.	apply to the constituent parts of a product		shall also apply to the constituent parts of a product.	control: identify and control shelf life-limited parts and materials. E6: Appropriate shelf-life controls shall be used. E12: Parts requiring special environments shall be identified and stored accordingly.
Packaging					4.15.4: Control packing, packaging and marking processes which ensure conformance to specified requirements.	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.		7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	8.D. Packaging: Product shall be delivered with identification, and where possible, in manufacturer's original packaging. 8.E. Electro-static Sensitive Devices: for these materials, package, handle and protect them with necessary precautions. E9: Shipped parts are to be protected from damage and/or deterioration.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Preservation					4.15.5: Apply appropriate methods of preservation and segregation of product.	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to theintended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.		7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and protection. Preservation shall also apply to the constituent parts of a product.	
Delivery					4.15.6: Arrange for appropriate protection of the product after final inspection and test.	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and	7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and		7.5.5: The organization shall preserve the conformity of product during internal processing and delivery to the intended destination, including identification, handling, packaging, storage and	11. Shipping: ship components and parts in ATA-300 compliant containers or equivalent as appropriate for the unit being shipped.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						protection. Preservation shall also apply to the constituent parts of a product.	protection. Preservation shall also apply to the constituent parts of a product.		protection. Preservation shall also apply to the constituent parts of a product.	
Control of Quality Records	4.5.3: Records.			4.8: Records and records management requirements.	4.16: How are the quality of the customer's product and its input materials documented?					
					4.16: Establish and maintain documented procedures for identification, collection, indexing, access, filing, storage, maintenance, and disposition of quality records.	4.2.4: Records shall be established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system. Records shall remain legible, readily identifiable and retrievable. A documented procedure shall be established to define the controls needed	4.2.4: Records shall be established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system. Records shall remain legible, readily identifiable and retrievable. A documented procedure shall be established to define the controls needed	3.4: Maintain and use records essential to the economic and effective operation of the quality system. {MIL-I: 3.2.2}: Maintain adequate records of all inspections and tests. {MIL-I: 3.2.4}: Contractor's inspection system shall assure that the latest applicable drawings, specifications and instructions required by the contract,	4.2.4: Records shall be established and maintained to provide evidence of conformity to requirements and of the effective operation of the quality management system. Records shall remain legible, readily identifiable and retrievable. A documented procedure	8.C.: Recall control: distributor must maintain records for parts identified by batch number and quantities sold to facilitate manufacturer's recall notices. 12. Records: maintain documentation of traceability for at least 7 years from time of sale. All life limited parts shall have records confirming life limited status.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						for the identification, storage, protection, retrieval, retention time and disposition of records.	for the identification, storage, protection, retrieval, retention time and disposition of records.	including authorized changes, are used for fabrication, inspection and testing.	shall be established to define the controls needed for the identification, storage, protection, retrieval, retention time and disposition of records.	
Internal Quality Audits	4.5.4: Environ-mental manage-ment system audit.			6.3.4: The organization shall conduct audits of the SMS to determine that it conforms to requirements and is effectively implemented and maintained.	4.17: How does the supplier check on the effectiveness and correctness of his quality system?					
					4.17: Establish and maintain documented procedures for planning and implementing internal quality audits to verify if quality activities and related results comply with	8.2.2: The organization shall conduct internal audits at planned intervals to determine whether the quality management system conforms to the	8.2.2: The organization shall conduct internal audits at planned intervals to determine whether the quality management system conforms to the	{MIL-I: 3.1}: Perform inspections and tests to substantiate product conformance to contract requirements.	8.2.2: The organization shall conduct internal audits at planned intervals to determine whether the quality management system conforms to	E5: Conduct a self-evaluation program of the quality system standard, documentation, and corrective actions.

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
					planned arrangements, and to determine the effectiveness of the quality systems.	planned arrangements (see 7.1), to the requirements of this International Standard and is effectively implemented and maintained.	planned arrangements (see 7.1), to the requirements of this International Standard and is effectively implemented and maintained.		the planned arrangements (see 7.1), to the requirements of this International Standard and is effectively implemented and maintained.	
Training	4.4.2: Training, awareness and competence.			8.3: Initial and recurrent SMS training shall be developed for all levels of the organization.	4.18: How does the supplier know that his people who built and tested the customer's product are qualified?					
					4.18: Establish and maintain documented procedures for identifying training needs and provide for the training of all personnel performing quality activities; maintain appropriate records.	6.2.2: The organization shall determine the necessary competence for personnel performing work affecting product quality, provide training or take actions to satisfy these needs, evaluate the effectiveness of the actions taken, etc.	6.2.2: The organization shall determine the necessary competence for personnel performing work affecting product quality, provide training or take actions to satisfy these needs, evaluate the effectiveness of the actions taken, etc.		6.2.2: The organization shall determine the necessary competence for personnel performing work affecting product quality, provide training or take actions to satisfy these needs, evaluate the	4. Training and authorized personnel: distributor shall have personnel who are properly trained to perform inspection, handling and record keeping procedures to support the organization's adopted quality system. E2: Training of personnel to

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
									effectiveness of the actions taken, etc.	ensure quality system is properly conducted. E11: All quality personnel shall be trained and authorized to make quality determinations.
Servicing					4.19: If the supplier told the customer that he provides service for the customer's product, how will the supplier do that, and how will he make sure that servicing personnel are qualified?					
					4.19: When specified, establish and maintain documented procedures for performing, verifying, and reporting that servicing meets the specified requirements.	7.5.1: The organization shall plan and carry out production and service provisions under controlled conditions.	7.5.1: The organization shall plan and carry out production and service provisions under controlled conditions.		7.5.1: The organization shall plan and carry out production and service provisions under controlled conditions.	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Statistical Techniques					4.20: If the supplier is using statistical techniques to ensure the quality of the customer's product, how will the supplier ensure that the techniques are used correctly and that the results are within limits?			6.6: Statistical planning, analysis, tests and quality control procedures may be used whenever such procedures are suitable to maintain the required control of quality. Any sampling plan used shall provide valid confidence and quality levels.		
Identification of Need					4.20.1: Identify need for statistical techniques required for establishing. Controlling, and verifying process capability and product characteristics.	8.1: The organization shall plan and implement the monitoring, measurement, analysis and improvement processes need to demonstrate conformity of the product, ensure conformity with the quality management system, and to continually improve the	8.1: The organization shall plan and implement the monitoring, measurement, analysis and improvement processes need to demonstrate conformity of the product, ensure conformity with the quality management system, and to continually improve the		8.1: The organization shall plan and implement the monitoring, measurement, analysis and improvement processes need to demonstrate conformity of the product, ensure conformity with the quality management system, and to	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						effectiveness of the quality management system. This shall include determination of applicable methods, including statistical techniques, and the extent of their use.	effectiveness of the quality management system. This shall include determination of applicable methods, including statistical techniques, and the extent of their use.		continually improve the effectiveness of the quality management system. This shall include determination of applicable methods, including statistical techniques, and the extent of their use.	
Procedures	4.4.6: Operational control.			4.6: Requirements for developing and maintaining operational procedures and controls for operating the SMS.	4.20.2: Establish and maintain documented procedures to implement and control the use of statistical techniques identified in 4.20.1.	8.1: The organization shall plan and implement the monitoring, measurement, analysis and improvement processes need to demonstrate conformity of the product, ensure conformity with the quality management system, and to continually improve the effectiveness of the quality management	8.1: The organization shall plan and implement the monitoring, measurement, analysis and improvement processes need to demonstrate conformity of the product, ensure conformity with the quality management system, and to continually improve the effectiveness of the quality management	{MIL-I: 3.9}: Sampling inspection procedures used to determine quality conformance of supplies shall be as stated in the contract or shall be subject to Government approval.	8.1: The organization shall plan and implement the monitoring, measurement, analysis and improvement processes need to demonstrate conformity of the product, ensure conformity with the quality management system, and to continually improve the effectiveness	

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
						system. This shall include determination of applicable methods, including statistical techniques, and the extent of their use.	system. This shall include determination of applicable methods, including statistical techniques, and the extent of their use.		of the quality management system. This shall include determination of applicable methods, including statistical techniques, and the extent of their use.	
Other Issues External to ISO 9001:										
Relation to Other Contract Requirements; Relation to MIL-I-45208A								1.4: MIL-Q-9858A shall be in addition to and not detract from other contract requirements. 1.5: MIL-Q-9858A contains requirements which exceed the requirements of MIL-I-45208A, Inspection System Requirements.		
Superceding, Supplemen-tation and Ordering								2: Reference specifications which form a part of MIL-Q-9858A.		

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Rights and Data								4.1: Deliver correct drawings and change information in full compliance with contract requirements concerning rights and data, both proprietary and other		
Cost Related to Quality								3.6: Maintain and use quality cost data as a management element of the quality program to identify costs of prevention and correction of nonconform-ing supplies.		
Review of Instructions								4.1: Review supplemental specifications, process instructions, production engineering and industrial engineering instructions, and work instructions for adequacy,		

Table A-1. Aviation Quality Standards Cross-Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
								currency and completeness.		
Government Inspection at Subcontractor or Vendor Facilities								7.1 and {MIL-I: 3.11}: Government reserves the right to inspect at sources of supplies or services not manufactured or performed at contractor's facility to determine conformance of those supplies or services with contract requirements.		
Notes								8: MIL-Q-9858A is intended for complex supplies, components, equipments and systems for which the requirements of MIL-I-45208A are inadequate.		

Table A-1. Aviation Quality Standards Reference Table (Continued)

ANSI/ASQC Q9002 Issue	ISO 14001	Transport Canada/Safety Management Systems	UK CAA/Safety Management Systems for Commercial Air Transport Operations	JPDO Draft SMS Standard, v.9	ANSI/ASQC Q9002 Element and Key Question (Note 1); Subelement and Description	SAE Aerospace Standard, AS9100, Issued 1999-11, (See Note 4)	EN ISO 9000:2000 December 2000 These standards are identical to ISO 9000:2000	MIL-Q-9858A Paragraph March 1985 {MIL-I 45208A (July 1991) as noted}	AECMA, EN 9100, Issued December 2000 Note: This European Standard is identical to the SAE-AS 9100	ASA 100 (October 1996) FAA Advisory Circular 00-56 (9/5/96, "E" denotes Element, "C" denotes Criteria)
Qualified products								{MIL-I: 3.8}: Although a product may be on a Qualified Products List, the contractor is responsible for furnishing supplies that meet all contract requirements, or for performing specified inspections and tests for such material.		
Facilities										3. Facilities: appropriate facilities shall be maintained to ensure that storage does not damage inventory.
Standard Checklist										XX

Notes:
1). From The ISO 9000 Book, A Global Competitor's Guide to Compliance & Certification by John Rabbit and Peter Bergh, Quality Resources, 1993.
2). Note: Part 145 has been revised with effective dates of April 6, 2003 and April 6, 2005 respectively. This document is based on the current part 145 in effect at the time of the writing.
3). Source: Aviation Industry Quality Systems by Michael J. Dreikorn, ASQC Quality Press, 1995.
4). Includes all ASQ9001: 1994 quality system requirements and specifies additional requirements for the quality system of the aerospace industry.
ANSI = American National Standards Institute MIL = Military Standard
ASQC = American Society for Quality Control SAE = Society of Automotive Engineers
ASA = American Society for Quality

APPENDIX B—INTERNATIONAL SMS STANDARDS CROSS-REFERENCE TABLE

Table B-1. International SMS Standards Cross-Reference Table

Safety Management System Component	FAA-JPDO SMS Standard v. 9	Transport Canada/Safety Management Systems Guidance (TP 13739 E: Introduction to Safety Management Systems)	UK CAA/Safety Management Systems Guidance (CAP 712: Safety Management Systems for Commercial Air Transport Operations-A Guide to Implementation prepared by the Air Transport Operations –Safety Management Group; CAP 726: Guidance for Developing and Auditing a Formal Safety Management System)	Civil Aviation Safety Authority (CASA) of Australia/Safety Management Systems Guidance (Draft Manual of Standards Part 119 – Air Operator Certification – Air Transport; Draft Advisory Circular, AC 119-270(1): Safety Management Systems)
Safety Policy	Sec. 4.2: Top management responsibility to define safety policy.	An operator's safety policy should clearly state the company's intentions, management principles and aspirations for continuous improvements in the safety level, through documented policies describing what organizational processes and structure it will use to achieve the safety management system. The safety policy should include a description of each element of the system as required by the regulations.	A corporate approach to safety must meet the following criteria: published safety accountabilities of managers; requirements for a safety manager; the ability to demonstrate that it generates a positive safety culture throughout the organization; documented business policies, principles and practices in which safety is inherent; commitment to a safety oversight process which is independent of line management; regularly reviewed safety improvement plans; formal safety review processes.	The safety policy should include a statement in writing, signed by the CEO that the CEO is committed to: achieving and maintaining the operator's safety objectives; giving emphasis to the importance of a positive safety culture in the operator's organization; and providing for a commitment to the establishment and review of the operator's safety objectives.
Management Responsibility	Sec 4.4: Top management shall have ultimate responsibility for the SMS.	Company senior management must make a solid commitment by devoting sufficient time, resources and attention to safety as a management issue.	A demonstrable Board-level commitment to an effective formal Safety management System must exist.	A SMS is an explicit element of the corporate management responsibility that sets out an operator's safety policy and defines how it intends to manage safety as an integral part of its overall business.

Table B-1. International SMS Standards Cross-Reference Table (Continued)

Safety Management System Component	FAA-JPDO SMS Standard v. 9	Transport Canada/Safety Management Systems Guidance (TP 13739 E: Introduction to Safety Management Systems)	UK CAA/Safety Management Systems Guidance (CAP 712: Safety Management Systems for Commercial Air Transport Operations-A Guide to Implementation prepared by the Air Transport Operations –Safety Management Group; CAP 726: Guidance for Developing and Auditing a Formal Safety Management System)	Civil Aviation Safety Authority (CASA) of Australia/Safety Management Systems Guidance (Draft Manual of Standards Part 119 – Air Operator Certification – Air Transport; Draft Advisory Circular, AC 119-270(1): Safety Management Systems)
Quality Policy	Sec. 4.3: Quality policy in support of safety.	A Quality Assurance System (QAS) is an integral component of a SMS. A QAS is based on the principle of the continuous improvement cycle. In much the same way that a SMS facilitates continuous improvements in safety, a QAS ensures process control and regulatory compliance through constant verification and upgrading of the system. These objectives are achieved through the application of similar tools: internal and independent audits, strict document controls and on-going monitoring of corrective actions.	Quality assurance is an integral component of a SMS. An independent safety oversight process is much like a Quality Assurance program but is focused on the safe performance of the process under review rather than simple compliance.	The SMS requirements are compatible with quality management systems. Operators are encouraged to structure their documented processes to achieve a fully integrated management system. Companies establishing a SMS need to take a pragmatic approach, building where possible on existing procedures and practices (particularly Quality Management).
Organization	Sec. 4.4: Describes organizational structure and responsibilities.	The organizational structures and activities that make up a safety management system are formed throughout an organization. The system must be integrated throughout the establishment, which is achieved by the implementation and continuing support of a coherent safety policy which leads to well designed procedures.	A fully-fledged Safety Management System is a formalized, company-wide system. Established at the corporate level, the SMS then devolves out into the individual departments of the company.	A SMS is an integrated set of work practices, beliefs and procedures for monitoring and improving the safety and health of all aspects of an operation. It recognizes the potential for errors and establishes robust defenses to ensure that errors do not result in incidents or accidents. Safety must be actively managed from the top of the company. Safety management must be seen as an integral aspect of business management.

Table B-1. International SMS Standards Cross-Reference Table (Continued)

Safety Management System Component	FAA-JPDO SMS Standard v. 9	Transport Canada/Safety Management Systems Guidance (TP 13739 E: Introduction to Safety Management Systems)	UK CAA/Safety Management Systems Guidance (CAP 712: Safety Management Systems for Commercial Air Transport Operations-A Guide to Implementation prepared by the Air Transport Operations –Safety Management Group; CAP 726: Guidance for Developing and Auditing a Formal Safety Management System)	Civil Aviation Safety Authority (CASA) of Australia/Safety Management Systems Guidance (Draft Manual of Standards Part 119 – Air Operator Certification – Air Transport; Draft Advisory Circular, AC 119-270(1): Safety Management Systems)
Management Review	Sec. 6.7: Top management required to conduct regular reviews of the SMS.	Senior management must develop and communicate safety policy that allocates responsibilities and holds people accountable for meeting safety performance goals.	Every level of management must be given a safety accountability. The contribution of the staff at and below supervisor level must be emphasized.	A SMS should be reviewed at least annually, through a combination of an annual strategic review, and more frequent tactical reviews, of the performance of the SMS. The strategic review should focus on the performance and continuing suitability of the SMS, the safety policy, and the safety objectives, in response to statistics prepared by the operator's safety manager, or the CEO for smaller operators, on the performance of the SMS and to reports to the CEO by other key personnel.
Hazard Identification and Analysis	Sec. 5: Requirement for including safety risk management.	A certificate holder's safety assessment system should encompass the following basic elements: systems for identifying potential hazards; risk management techniques; ongoing monitoring/quality assurance. A safety assessment should be undertaken, at a minimum: during implementation of the safety management system and then at regular intervals; when major operational changes are planned; if the organization is undergoing rapid change, e.g., growth or cutting back, introducing new equipment or procedures; when key personnel change.	The effective identification of hazards can be achieved by brainstorming, staff surveys and a review of pertinent accident/incident records from both internal and external sources. Hazard identification should be done initially to provide a comprehensive assessment of the risks that face a company. The process should be periodically reviewed and repeated whenever there is significant change within the organization.	The operator should include requirements for: identifying hazards; implementing preventive action needed; recording results of action taken; reviewing preventive action taken. The SMS should include procedures for: risk identification; risk analysis and assessment; risk management; reporting procedures.

Table B-1. International SMS Standards Cross-Reference Table (Continued)

Safety Management System Component	FAA-JPDO SMS Standard v. 9	Transport Canada/Safety Management Systems Guidance (TP 13739 E: Introduction to Safety Management Systems)	UK CAA/Safety Management Systems Guidance (CAP 712: Safety Management Systems for Commercial Air Transport Operations-A Guide to Implementation prepared by the Air Transport Operations –Safety Management Group; CAP 726: Guidance for Developing and Auditing a Formal Safety Management System)	Civil Aviation Safety Authority (CASA) of Australia/Safety Management Systems Guidance (Draft Manual of Standards Part 119 – Air Operator Certification – Air Transport; Draft Advisory Circular, AC 119-270(1): Safety Management Systems)
Safety Action (Corrective, Preventive, Emergency Response)	Sec. 6.6: The organization shall take timely corrective action to eliminate the cause of nonconformities in order to prevent recurrence. Sec. 7: The organization shall establish and maintain documented procedures for emergency preparedness and response.	Once a safety event report has been investigated and analyzed, or a hazard identified, a safety report should be given to the appropriate manager for determination of corrective or preventative action. The responsible manager should develop a corrective action plan (CAP) in response to the findings. The corrective actions should be monitored and evaluated on a regular basis through the internal audit process.	Companies must ensure that their staff are aware of the internal safety-related investigation procedure. The subject and findings of the investigation should be disseminated to all staff affected. The findings should result in positive actions to prevent recurrence of the event and not apportion blame.	The operator should develop procedures to deal with the following: investigative action; remedial action; corrective action; preventive action. The operator should establish and maintain monitoring procedures to review corrective action and ensure that it is effective.
Documentation	Sec. 4.5: The organization shall document all aspects and elements of the SMS.	Documentation requirements described include: identification of applicable aviation safety regulations, standards and exemptions; documentation describing system components; implementing changes to company documentation; maintenance of current, applicable and effective documentation.	Documentation requirements exist for the communication of the safety policy, addressing safety concerns and events, and the results of the internal audit process and follow-up activity.	Requirements exist for document and records control that include: methods for identifying the current issue of any safety-related document; document changes are clearly identified; documentation is adequately labeled and filed; documentation has clear retention requirements.

Table B-1. International SMS Standards Cross-Reference Table (Continued)

Safety Management System Component	FAA-JPDO SMS Standard v. 9	Transport Canada/Safety Management Systems Guidance (TP 13739 E: Introduction to Safety Management Systems)	UK CAA/Safety Management Systems Guidance (CAP 712: Safety Management Systems for Commercial Air Transport Operations-A Guide to Implementation prepared by the Air Transport Operations –Safety Management Group; CAP 726: Guidance for Developing and Auditing a Formal Safety Management System)	Civil Aviation Safety Authority (CASA) of Australia/Safety Management Systems Guidance (Draft Manual of Standards Part 119 – Air Operator Certification – Air Transport; Draft Advisory Circular, AC 119-270(1): Safety Management Systems)
Training and Promotion	Sec. 8: Describes the requirements for safety promotion, including training for all levels of the organization.	To effectively accomplish complying with all the requirements for SMS, the company should document the training requirements for each area of work within the company.	Competency and subsequent refresher SMS training may be provided through formal courses and/or through structured development in the workplace. The company should have clearly defined arrangements to ensure that the work achieved by the safety Manager and committees, as well as line management, is transmitted to all those involved in the relevant activities.	The operator should ensure that new personnel are trained in the operation of the SMS during initial training. Personnel training in SMS can be more or less formal, depending on the size of the organization.

FAA = Federal Aviation Administration
JPDO = Joint Planning and development office
UK = United Kingdom
CAA = Civil Aviation Authority
SMS = Safety Management System