

*Agli Organismi di certificazione accreditati in conformità allo schema EN 9100 series*

Loro sedi

Vs. e-mail

Ns. rif.: DC2009UFN017

Milano, 09/11/2009

Oggetto: Disposizione relativa allo schema di accreditamento per il settore aerospaziale in conformità allo schema EN 9100

Egregi Signori,

a seguito dell'ultima riunione internazionale di settore, con la presente Vi comunichiamo alcune informazioni relative allo schema EN 9100 in cui siete accreditati.

È attiva e mandatoria da aprile 2009 la "**Resolution 58**" del 15 ottobre 2009 di IAQG – International Aerospace Quality Group – l'organizzazione che gestisce lo schema EN 9100.

Il documento indica le condizioni cui devono sottostare gli Organismi di certificazione che non comunicano su base trimestrale la programmazione degli audit nel settore in parola.

Tutti gli Organismi accreditati nello schema sono tenuti a seguire le regole di IAQG e allo scopo sono invitati a consultare regolarmente il database internazionale "OASIS" di loro competenza in cui sono archiviati i documenti di riferimento.

Vi informiamo inoltre che nell'ambito dello schema aerospaziale sono in fase di elaborazione/ballot i **Final Draft** della norma **EN 9104-001** – che andrà a sostituire i relativi requisiti dell'attuale UNI EN9104 dell'agosto 2006 – e della norma **EN 9101**, che definisce i nuovi criteri di audit a fronte della norma EN 9100 in edizione 2009 – andando a sostituire l'analogo documento oggi in vigore.

I Final Draft sono disponibili sia per gli Enti di accreditamento che per gli Organismi di certificazione accreditati nello schema – come deciso in sede IAQG durante l'ultima riunione di Monaco – per consentire l'inizio del processo di aggiornamento delle procedure e regolamenti di accreditamento e certificazione.

Non appena disponibili, il piano di transizione e il "Final Ballot Draft" delle norme citate verranno opportunamente pubblicati.

In allegato i documenti in oggetto.

L'informativa è disponibile anche sul sito [www.accredia.it](http://www.accredia.it) alla sezione "Documentazione Organismi" – "Disposizioni tecniche" e nell'area riservata.

Con i più cordiali saluti

  
Dr. Ing. Alberto Musa  
Direttore di Dipartimento

<p>Resolution n° 58</p>	<p>October 15, 2009</p>	<p>Certification Bodies accredited or seeking accreditation as part the IAQG ICOP process shall actively support national CBMCs and Accreditation Bodies in achieving the required oversight and assessment activities by submitting audit programmes (actual and annual planned dates) for audit of their clients' quarterly (in December, March, June and September each year) for a period covering at least the upcoming 3 months and agreeing the date of office assessments by the end of the previous calendar year.</p> <p>Where a CB does not submit their quarterly audit programs to both the CBMC and the AB by the end of the due month or does not agree proposed office assessment dates, a nonconformity shall be issued by the AB. Where the CB does not close the nonconformity within 3 weeks of issue, the AB shall undertake a decision to suspend the AQMS accreditation of the CB.</p> <p>Should the CB not submit their quarterly audit plans by the end of the due month within 12 months of the date of issue of the first nonconformity, a further nonconformity shall be issued and the ABs process for a decision for suspension of AQMS accreditation shall be initiated immediately.</p> <p>Where the required annual programme for oversight and assessment of a CB is not completed by the end of each calendar year, regardless of the reasons, the AB shall undertake a decision to suspend the AQMS accreditation of the CB.</p> <p>Should the required annual programme for oversight and assessment of a CB not be completed twice within an accreditation cycle the AB shall initiate a process to withdraw the AQMS accreditation of the CB.</p>	<p>This resolution is effective from 15 April 2009 with all certification bodies being required to submit their first audit programs and agree office assessment and oversight dates before the end of June 2009. This resolution will remain in place until superseded.</p>
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<b>AEROSPACE STANDARD</b>	<b>9104/1</b>	
	Issued	<i>Preliminary Review Draft</i>
	Revised	2009-9-09
	Superseding	9104 2005-01
(R) Requirements for Aviation, Space, and Defense Quality Management System Certification Programs		

### RATIONALE

After the initial publication of International Aerospace Quality Group (IAQG) standard 9104 in 2004, it became evident that a single standard containing all aspects of the Industry Controlled Other Party (ICOP) Aerospace Quality Management System (AQMS) was too complex. It was decided that the standard be broken into three sections:

- 9104/1 – Requirements for Aviation, Space, and Defense Quality Management System Certification Programs;
- 9104/2 – Requirements for Oversight of the Aerospace Quality Management System Certification/Registration Programs; and
- 9104/3 – Requirements for Aerospace Auditor Competency and Training Courses.

The requirements for oversight and auditor qualification information (9104/2 and 9104/3 respectively) were removed from the original 9104 text. This effort necessitated the total rewrite of the initial standard, now re-designated as 9104/1, which is the keystone document of the 9104-series trilogy.

### FOREWORD

In December 1998, the aviation, space, and defense industry established the IAQG with the goal of achieving significant improvements in quality and reductions in cost throughout the value stream.

The IAQG developed specific requirements for aviation, space, and defense (interchangeably referred to as ‘aerospace’) quality management systems that are to be implemented and maintained throughout the supply chain for the design, manufacture, and maintenance of products used in aviation, space, and defense applications. These requirements are published simultaneously as AS/EN/JISQ 9100-series standards by SAE in the Americas, ASD in Europe, and SJAC in Japan of Asia/Pacific. Other countries can comply with technically equivalent national standards in their native language.

Another initiative of the IAQG was the development of a global scheme for the acceptance of audits performed by Certification Bodies (CBs), using the 9100-series standards, and taking into account the schemes already in use or under development in the various IAQG sectors. All these schemes have two major elements in common:

- The use of a 3<sup>rd</sup> party audit certification scheme with specific aviation, space, and defense elements and requirements, under the guidance and oversight of the aviation, space, and defense industry; and
- The use of a harmonized approach with the CBs for the purpose of improving the quality and process control throughout the entire supply chain.

This document defines the basic requirements for managing the AQMS standard certification scheme (referred to as the 'ICOP scheme'). Two other standards in this series (i.e., 9104/2, 9104/3) provide specific requirements for defining the oversight process, and the auditor qualification and training requirements, respectively. These three standards together are commonly referred to as the ICOP certification management system 'Trilogy'.

This document establishes provisions for the individual sector schemes for the controlled use of audit results provided by CBs, based on three primary criteria:

- The use of accredited CBs;
- The CB's use of qualified and credentialed AQMS auditors; and
- The use of international aviation, space, and defense standards for quality management systems.

This document addresses the following elements necessary for the ICOP scheme:

- a. The approval of Accreditation Bodies (ABs), Auditor Authentication Bodies (AABs), and Training Provider Approval Bodies (TPABs).
- b. The qualification, accreditation, and recognition of CBs.
- c. The audits of quality management systems by accredited CBs.
- d. The criteria for determining the content and duration of audits.
- e. The recording and disposition of nonconformities generated by the audits.
- f. The posting of audit results/findings and certification recommendations.
- g. The entry of data in the Online Aerospace Supplier Information System (OASIS) database.
- h. The use of International Accreditation Forum (IAF) guidance and mandatory documents on processes (e.g., auditor day calculations, multiple site certifications).

Additionally, this document references to the other standards in the 9104-series (i.e., 9104/2, 9104/3) that specifies:

- i. The minimum standards of qualification and experience for AQMS auditors.
- j. The authentication of auditors by AABs and recognition by IAQG sectors.
- k. The oversight of ABs by each Sector Management Structure (SMS).
- l. The oversight of CBs by applicable SMS and IAQG Original Equipment Manufacturers (OEMs), and other organizations/individuals who participate in the management of the ICOP scheme.
- m. Operation of the IAQG oversight function.

This document also provides guidance for the use of the required audit process reporting tools (see 9101) and provides clarifications and detail improvements resulting from the initial operation of the scheme.

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## 1. SCOPE

The purpose of this document is to define the process requirements and industry-accepted practices for managing the ICOP scheme, which provides confidence to the aviation, space, and defense organizations that their suppliers with certification of their quality management systems issued by accredited CBs meet the applicable standard requirements. The requirements established in this document are applicable to the IAQG and sector schemes for managing AQMS certification and associated activities. The requirements are applicable to IAQG working groups [e.g., SMS, Other Party Management Team (OPMT)], IAQG member companies, ABs, CBs, Certification Body Management Committees (CBMCs), AABs, TPABs, training providers, regulatory bodies, and organizations seeking/obtaining AQMS standard certification.

The AQMS standard adopted by the organization shall be 9100, 9110, and/or 9120, as appropriate to the organization's activities; these standards are referred to throughout this document as 'AQMS standards'. IAQG member companies have committed to recognize the certification of a supplier's quality management system to all equivalent AQMS standards (e.g., AS, EN, JISQ, NBR). Sectors can expand the application of the requirements defined in this document for other standards approved by the IAQG and its three sectors [i.e., Americas Aerospace Quality Group (AAQG), European Aerospace Quality Group (EAQG), and Asia-Pacific Aerospace Quality Group (APAQG)].

Certain data in the form of audit reports, nonconformities, checklists, or other company specific information, generated by the application of this standard, shall be handled as confidential (commonly referred to as proprietary or sensitive) between the parties generating, collecting, or using the data. Companies using this data shall keep its usage confidential both internally and externally, unless otherwise agreed in writing by the consenting parties. Data resident at the ABs and CBs on certified organizations shall not be shared with their competitors. However, this data can be subject to an audit or review, at any time, by applicable ABs, SMS, government or regulatory bodies, and the IAQG OPMT.

## 2. REFERENCES

Audits and assessments shall be based on the latest versions of the following quality management systems standards and guidelines, as applicable. For dated references, only the edition cited applies. When a conflict in requirements between this document and the referenced standards exist, the requirements of this standard shall take precedence.

9100	Quality Management Systems – Requirements for Aviation, Space and Defense Organizations
9110	Quality Management Systems – Requirements for Aviation Maintenance Organizations
9120	Quality Management Systems – Requirements for Aviation, Space and Defense Distributors
9101	Quality Management Systems – Audit Requirements for Aviation, Space, and Defense Organizations
9104/2	Requirements for Oversight of Aerospace Quality Management System Registration/Certification Programs
9104/3	Requirements for Aerospace Auditor Competency and Training Courses

NOTE: Equivalent versions (e.g., AS, EN, JISQ, SJAC, NBR) of the IAQG standards are published internationally in each sector.

IAQG Procedure 103 Maintenance of Standards Issued by the IAQG

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ISO 9000	Quality management systems – Fundamentals and vocabulary
ISO 9001	Quality management systems – Requirements
ISO/IEC 17011	Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies
ISO/IEC 17021	Conformity assessment – Requirements for bodies providing audit and certification of management systems
ISO/IEC 17024	Conformity assessment – General requirements for bodies operating certification of persons
ISO 19011	Guidelines for quality and/or environmental management systems auditing
IAF GD 3:2003	IAF Guidance on Cross Frontier Accreditation
IAF MD 1:2007	IAF Mandatory Document for the Certification of Multiple Sites Based on Sampling
IAF MD 2:2007	IAF Mandatory Document for the Transfer of Accredited Certification of Management Systems
IAF MD 3:2008	IAF Mandatory Document for Advanced Surveillance and Recertification Procedures
IAF MD 4:2008	IAF Mandatory Document for the use of Computer Assisted Auditing Techniques (“CAAT”) for Accredited Certification of Management Systems
IAF MD 5:2009	IAF Mandatory Document For Duration of QMS and EMS Audits
IAF ML 4:2005	Policies and Procedures for a Multilateral Recognition Arrangement on the Level of Accreditation Bodies and on the Level of Regional Groups

### 3. DEFINITIONS

Definitions for general terms can be found in ISO 9000 and the IAQG International Dictionary, which is located on the IAQG website. For the purpose of this document, the following definitions are used:

#### 3.1 Accreditation Body (AB)

A party recognized by an IAQG sector that has the primary responsibility for the accreditation of CBs to issue certifications to AQMS standards.

#### 3.2 Aerospace

The business of design, manufacture, maintenance, distribution, or support of aviation, space, and defense vehicles or engines, accessories, or component parts; and all ancillary and allied businesses, including vehicle maintenance and parts distribution operations.

#### 3.3 Aerospace Quality Management System (AQMS)

A quality management system based upon ISO 9001 that includes additional aviation, space, and defense requirements, as established in IAQG standards 9100, 9110, and 9120.



### 3.4 Aerospace Quality Management System (AQMS) Auditor

A person with the demonstrated attributes (i.e., training, audit experience, industry experience) and competence to conduct an audit on aviation, space, and defense organizations. AQMS auditors are defined as both Aerospace Experience Auditors (AEAs) and Aerospace Auditors (AAs) who have met the requirements set forth in 9104/3 and section 7.0 of this document.

NOTE: The term 'aerospace auditor' is the same as the term 'auditor' defined in 9104/3. Sectors may use other names for auditor, AA, and AEA as long as the requirements of this document and 9104/3 are applied.

### 3.5 Assessment

A systematic process to assess the competence of a conformity assessment body (e.g., AB, CB, AAB, TPAB) based on the assessment criteria (see ISO 17011).

### 3.6 Audit

A systematic, independent, and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled.

### 3.7 Auditor Authentication Body (AAB)

A body recognized by the IAQG sector that has the primary responsibility for certifying or approving persons (i.e., auditors) against specific requirements.

### 3.8 Central Office (also referred to as Central Function)

The multiple site organization location that controls the 'common' quality management system for the organization under a single AQMS standard certificate, as outlined in section 3.18.

### 3.9 Certification Body (CB)

An organization that audits and certifies the quality management system of organizations with respect to AQMS standards and any supplementary documentation required under the system.

### 3.10 Certification Body Management Committee (CBMC)

An organization within an SMS that functions on a national level (e.g., Italy, France, Germany, Spain, United Kingdom, Austria) responsible for 9104-series standards conformance in their respective countries. They perform the same functions as the SMS, under control of the SMS in their sector.

### 3.11 Containment

Action to control and mitigate the impact of a nonconformity and protect the customer's operation (stop the problem from getting worse); includes correction, immediate corrective action, immediate communication and verification that the nonconforming situation does not further degrade.

### 3.12 Cross Frontier

A policy that allows for an AB to conduct assessments/oversight on CBs operating in countries other than the country in which the AB accreditation or head office of the CB is based. The AB performing assessment/oversight has to be recognized by the IAQG.

### 3.13 Head Office (also Lead Office)

A CB office that has the overall responsibility for the implementation of the requirements associated to the 9104-series standards.

### 3.14 Industry Controlled Other Party (ICOP)

The AQMS standard certification scheme, under IAQG and industry management for the assessment and certification of organization quality management systems by other parties, in accordance with the requirements defined in the 9104-series standards.

### 3.15 International Aerospace Quality Group (IAQG)

A body of prime aviation, space, and defense OEMs. This group is chartered to develop common requirements and guidelines for use by the aviation, space, and defense industry for quality improvement.

### 3.16 International Aerospace Quality Group (IAQG) Other Party Management Team (OPMT)

A body of prime aerospace OEMs that has the primary responsibility for the management of the ICOP scheme.

### 3.17 International Aerospace Quality Group (IAQG) Sector or Sector

A sub-structure of the IAQG that consists of members in a specific geographic area (i.e., Americas, Europe, Asia/Pacific).

### 3.18 Multiple Site Organization

An organization having an identified central function (the central office, but not necessarily the headquarters of the organization) at which certain activities are planned, controlled, or managed; and a network of local offices or branches (sites) at which such activities are fully or partially carried out (see IAF MD 1, Multi-site Organization definition).

NOTE: If the organization meets both the definition of single site and multiple site, the organization and the CB shall choose the organization definition which best suits the organization.

### 3.19 Nonconformity (also referred to as Nonconformance)

The non-fulfillment of a requirement; a need or expectation that is stated, generally implied, or obligatory. Refer to 9101 for definitions of major and minor nonconformities.

NOTE: A nonconformity is based on the objective evidence of a single condition or multiple occurrences of a condition that does not conform to the requirements defined in the AQMS standard or procedure relating to the standard, or any nonconformities where the effect is judged to be detrimental to the integrity of the product, process, or service.

### 3.20 Office Assessment

An on-site evaluation of an AB, AAB, or TPAB management office or CB head office to the applicable AQMS standard requirements using the evaluation tools and methods contained in this document.

### 3.21 Online Aerospace Supplier Information System (OASIS)

The web-based IAQG application containing information on participating National Aerospace Industry Associations (NAIAs), recognized ABs, TPABs, AABs, accredited CBs, authenticated auditors, certified suppliers, and audits.

### 3.22 Pre-audit

Activities undertaken by a CB with its client after initial contact or application before commencement of initial certification auditing (Stage 1 and Stage 2).

### 3.23 Sector Management Structure (SMS)

The organization established in a sector that manages the application and oversight of the sector scheme based on this document. Each sector may use a different name for this organization [i.e., Registration Management Committee (RMC) in the Americas and Asia/Pacific, CBMC in Europe within ASD].

### 3.24 Single Site Organization

An aviation, space, or defense organization that operates in one or more buildings at the same location, that is managed under one quality management system; where all buildings and grounds are contiguous or no one building is outside of a 32 kilometer (20 mile) radius extended from the central office.

NOTE: If the organization meets both the definition of single site and multiple site, the organization and the CB shall choose the organization definition which best suits the organization.

### 3.25 Training Provider Approval Body (TPAB)

A body recognized by the SMS that has the primary responsibility to conduct the review and approval of training course content and training provider administration.

### 3.26 Witness Assessment

An evaluation of an assessment or audit team's (e.g., AB, CB) conduct of an on-site audit or assessment to applicable aerospace requirements and the assessment or audit team's procedures, using the evaluation tools and methods contained in this document and 9104/2.

### 3.27 Witness Audit

An evaluation to gauge an auditor's ability and competency to perform AQMS audits to the applicable aerospace standard/requirements.

## 4. REQUIREMENTS OF THE SECTOR MANAGEMENT STRUCTURE

4.1 The SMS has the responsibility for the management, review, approval, implementation, and modification of their sector procedure(s). The SMS shall be the governing body by which the requirements for and recognition of CBs and authentication of auditors to AQMS standards are determined, consistent with the requirements of this document.

4.2 The SMS has the responsibility to review and approve new AB accreditations of CBs. This is to be initially evaluated by the SMS or CBMC, if applicable, ensuring that an AB meets the requirements defined in section 5; particularly with respect to decision-making and the competence to undertake decision-making, which is annually verified through oversight of the AB against the requirements of this document.

Where agreed upon between the AB and the SMS or CBMC, if applicable, there can be an additional review, as part of the AB's accreditation decision-making process, by the SMS or an industry expert endorsed by the SMS ensuring that the AB fully meets the competence requirements of section 5.4.2.

4.3 The SMS shall determine and approve CBMCs, when utilized. CBMCs operate as an extension of the SMS, performing the same functions on a national level, per the requirements of this standard.

- 4.4 The SMS and CBMC, if applicable, have the responsibility to report to the IAQG OPMT, OASIS administrator, and other parts of the SMS notification of suspension or withdrawal of ABs, CBs, AAB, and TPABs.
- 4.5 The SMS shall establish which ABs will accredit CBs for AQMS standard certification in accordance with this document. The method and results of approval shall be documented and records maintained. ABs approved by the SMS shall be identified in the OASIS database.
- 4.6 The SMS shall recognize CBs that certify the AQMS of organizations. The accreditation of CBs for AQMS standards shall be granted and surveillance performed by the AB in accordance with this document. The method and results of recognition shall be documented and records maintained. CBs recognized by the SMS shall be identified in the OASIS database.
- 4.7 Each SMS shall define a process for the approval, suspension, and withdrawal of approval of AABs and TPABs in accordance with the requirements of 9104/3 and this document. Only AABs approved by an SMS shall qualify for auditor evaluation, authentication, and re-authentication.
- Those who participate in the evaluation or make the decision to approve, suspend, or withdraw an AAB or TPAB shall not have participated in the development of the management systems, processes, or participated in the work (including any circumstances that may lead to suspension or withdrawal) of the AAB or TPAB for a minimum period of two years before the decision. Furthermore, they shall not have any personal, contractual, voluntary, or formal relationship with the AAB or TPAB that would present a potential conflict of interest to the impartiality of the decision.
- 4.8 Where an AAB or TPAB's approval/recognition is withdrawn, the SMS shall reject any application for re-approval for a period of 12 months from the date of withdrawal. The AAB or TPAB has the right to appeal during this time period to the IAQG or IAQG sector.
- 4.9 The SMS shall approve or recognize, as appropriate, AABs that authenticate AQMS auditors. The authentication of auditors to AQMS standards shall be granted by the AAB in accordance with this document and 9104/3. The method and results of approval/recognition shall be documented and records maintained. AABs approved/recognized by the SMS shall be identified in the OASIS database.
- 4.10 The SMS shall approve or recognize, as appropriate, TPABs that approve the AQMS standard training courses and training providers. The approval of training courses and training providers for AQMS standards shall be granted by the TPAB in accordance with this document and 9104/3. The method and results of approval/recognition shall be documented and records maintained. TPABs approved/recognized by the SMS shall be identified in the OASIS database.
- 4.11 The SMS shall recognize the authentication by AABs of auditors that perform AQMS audits of organizations. This shall be documented by a formal process by each SMS in accordance with this document and 9104/3. The method and results of recognition shall be documented and records maintained. AQMS auditors recognized by the SMS shall be identified in the OASIS database.
- 4.12 The approval/recognition of ABs, AABs, TPABs, CBs, and auditors in any sector to the requirements of this standard shall be recognized by the other IAQG sectors.
- 4.13 Each SMS has the right to withdraw or suspend approval/recognition of ABs, CBs, AABs, TPABs, or auditors based on, but not limited to, poor performance, nonconformity to requirements, or falsification of data.
- 4.14 Each SMS shall establish and maintain operating procedures, where needed, which support implementation and conformance to the SMS requirements established by this document. The procedures shall include record retention requirements.

- 4.15 Each SMS shall report essential data that describes deployment activities to the IAQG OPMT. Essential data includes information on the auditor population (i.e., approvals, disapprovals, numbers of AAs and AEAs), the CB population (i.e., approvals, disapprovals), auditor training and authentication organizations, the number of AQMS standard certifications issued, and oversight activities by the SMS and IAQG OEMs.

AB, CB, auditor approval documents, and audit reports by CBs of organizations and by ABs of CBs can be reviewed by the IAQG OPMT.

- 4.16 Each sector shall define a process for and the issuance of resolutions to provide clarification to this standard, 9104/2 and 9104/3 standards, and sector specific scheme process documentation. However, the SMS shall ensure concurrence from the other sector IAQG OPMT representatives before issuance.

All sector and IAQG OPMT resolutions shall be published through the OASIS database (see OPMT Resolution Log). Once published in OASIS, resolutions shall have the same authority as the applicable standard.

## 5. REQUIREMENTS FOR ACCREDITATION BODIES

### 5.1 General

The responsibilities of the AB shall be granting, maintaining, suspending, extending, and withdrawing accreditation of CBs in concurrence with the applicable SMS to the requirements of this document.

The AB shall agree to periodic surveillance and witness assessments by the approving SMS. ABs shall afford the IAQG members and applicable regulatory authorities the 'right of access' to all AB and CB records and information related to their AQMS sector program, including AB and CB activities associated with this document and recognition by the applicable SMS. ABs shall ensure that this 'right of access' is communicated to its AQMS sector accredited CBs. This access will also include information or records pertaining to IAF 'peer evaluations' of the AB.

### 5.2 Organizational Requirements for Accreditation Bodies

- a. ABs shall conform to requirements defined in ISO/IEC 17011 and IAF ML 4. ABs shall be members of the IAF and signatories of the IAF Multilateral Agreement (MLA) for the accreditation of CBs that certify quality management systems, in order to participate in this process.
- b. The AB shall work with the applicable IAQG sectors to give assurance that CBs continue to perform in a manner consistent with the 9104-series standards requirements.
- c. As part of the AB's structure in developing and maintaining the principles and major policies of operation of its accreditation system, as defined in ISO/IEC 17011, the AB shall have a person(s) with current aviation, space, or defense industry involvement through direct and relevant work experience in the industry [i.e., involvement with aerospace manufacturing/maintenance, the National Aviation Authority (NAA), NAIA, or equivalent].

### 5.3 Quality Management System Requirements for Accreditation Bodies

- a. The AB shall have procedures, tools, and techniques in its system in accordance with the requirements of ISO/IEC 17011 and this document for granting, maintaining, suspending, extending, and withdrawing accreditation of CBs under the ICOP scheme. ABs shall accredit each CB for the certification of each AQMS standard in accordance with the requirements of this document.
- b. ABs shall require CBs to identify a lead office that has overall responsibility for the implementation of the requirements of the 9104-series standards. Responsibility and authority for the design, development, and maintenance of the implementation of the 9104-series standards shall be through a

person(s) or office employee, or directly contracted to that CB lead office location. ABs shall require that this person(s) and office is identified.

- c. ABs shall require that activities relating to the implementation of the 9104-series standards, including the initial qualification and performance monitoring of auditors, application review, assignment of audit teams, review of reports, certification decisions, and the issue of certification documents are all conducted and controlled by a competent person(s) employed or directly contracted by the CB lead office. The IAQG, SMS/CBMC, and AB do not recognize critical locations (as defined by the IAF) or outsourcing of any of the above activities.
- d. The AB shall present CB accreditation decisions for recognition by the SMS (see section 4.2).
- e. ABs shall have a CB application process for AQMS certification. The CB application shall provide the AB with evidence that the CB has developed the necessary documented process to meet the requirements of this document for each applicable AQMS standard.
- f. ABs shall ensure that accreditation certificates clearly identify the CB's aerospace lead office. Accreditation certificates shall be uploaded to OASIS and the data within OASIS shall include the aerospace office location, contact information, and the accredited aerospace standards.
- g. The AB's application process shall provide information and seek assurance that applicant CBs will not issue any AQMS standard certificates before a decision to grant accreditation for AQMS certification to the CB has been made. ABs shall ensure that CBs communicate in writing to any applicant or client that AQMS certification cannot be issued until the CB is accredited for the AQMS by the AB. Failure by the CB to conform with these requirements shall be seen as bringing AQMS accreditation, the ICOP scheme, and the IAQG into disrepute, and the management system of the AB may terminate the application process. Where the application has been withdrawn, the AB shall not process any subsequent applications for AQMS certification for a period of not less than 12 months.
- h. When an AB receives an application to accredit a CB outside of its normal region (i.e., country, sector), the AB shall recommend the CB seek accreditation through the ICOP recognized AB operating in the CB's region. ABs involved in accrediting a CB outside of its normal region (i.e., country, sector) shall notify the ICOP scheme recognized AB operating in the country of the CB's application.

### 5.3.1 Certification Body Initial Accreditation to Aerospace Quality Management System Standards

Initial accreditation for a CB to AQMS standards shall be to 9100. The AB's management system shall ensure, at a minimum, the following activities are performed and identified nonconformities resolved:

- documentation review to include, but not limited to, revisions to the CB's documented management system, established competence requirements, and any other area that indicates conformance of requirements to this document;
- lead office assessments; and
- witness assessments to include, at a minimum, one Stage 1 audit and one Stage 2 audit for the complete 9100 standard. If the CB is already accredited by another AB and recognized under the ICOP scheme, the witness assessments can take place during a surveillance audit.

### 5.3.2 Certification Body Extension of Scope of Accreditation

To extend the scope of accreditation of a CB beyond 9100 to provide further AQMS standards certification, the AB's management system shall ensure, at a minimum, the following activities are undertaken:

a. Initial Accreditation for 9110

Documentation review to include, but not limited to, revisions to the CB's documented management system, established competence requirements, and any other area that indicates conformance of requirements to this document. Witness assessments shall include, at a minimum, one Stage 1 and one Stage 2 audit for the complete 9110 standard.

b. Initial Accreditation for 9120

Documentation review to include, but not limited to, revisions to the CB's documented management system, established competence requirements, and any other area that indicates conformance of requirements to this document.

### 5.3.3 Certification Body Accreditation Surveillance and Recertification

For surveillance and recertification of the CB accreditation to provide AQMS certification, the AB's management system shall ensure, at a minimum, the required assessment activities defined in Table 1 are conducted, including:

- at least one annual office assessment of the lead office; and
- at least one annual witness assessment.

Where CB competency or conformity issues are identified by the AB, the number of visits to the CB may be increased until confidence of competence and conformance is re-established by the AB.

Number of AQMS Sites Certified by a CB*	Minimum Number of CB Client Files to be Reviewed Annually*	Number of Annual Witness Assessments*
1-3	All client files	1
4-25	3	1
26-50	5	1
51-90	6	2
91-150	7	2
151-280	10	3
281-500	11	4
501-1200	15	5
1201-3200	18	6

\* Quantities based on the OASIS database results at the time of assessment planning.

NOTE: A CB client file is information and records relating to a specific applicant and/or client, as documented in ISO 17021.

TABLE 1 – ACCREDITATION BODY ASSESSMENT REQUIREMENTS OF CERTIFICATION BODIES

NOTE: Recognizing that review of each CB client file takes an average of three hours, an AB may conduct part of the file review by remote access, when all of the following arrangements are made with a CB:

- 1) The CB has all client records electronically filed and accessible remotely.
- 2) The CB gives sufficient remote electronic access to the AB assessor allowing them to view all records related to the certification of the client; including granting access to associated

application, quotation, auditing, calculation of audit duration, the certification decision, and any of the auditor's competence and demonstration of competence records.

- 3) The AB assessor has been appropriately trained and oriented to the CB's system to be able to access the associated records.
- 4) The review of client files is to occur prior to the scheduled on-site assessment.
- 5) At least two of the client files shall be reviewed on-site.

#### 5.3.4 Accreditation Body Witness Assessment of Certification Bodies

The AB's management system shall ensure that during one complete accreditation cycle and within the scope of each CB's accreditation, the following witness assessments are completed:

- each AQMS standard accredited shall be witnessed at least once; and
- each CB certification cycle audit stage (i.e., Stage 1, Stage 2, surveillance, recertification) shall be witnessed at least once.

The number of witness assessments for each standard shall be approximately proportional to the number of certificates issued for each standard.

The ABs management system shall ensure that for each audit witnessed, the AB assessment team shall be present for the duration of the CB audit from the opening meeting to the closing meeting.

NOTE: The AB shall plan to witness as many different CB AQMS authenticated auditors, as possible.

#### 5.3.5 Authenticated AQMS Auditor Competency Issues

Where an authenticated auditor competency issue is identified, in relation to AQMS certification audits, and when deemed appropriate by an AB, SMS representative, and/or CB; the results of aerospace witness assessments and associated data shall be shared with the AAB responsible for the subject auditor's aerospace authentication.

#### 5.3.6 Accreditation Body Symbols Use

The AB's management system shall provide for the assessment of the use of AB's symbols on certification documents and provision for use by clients in relation to the ICOP scheme.

#### 5.3.7 Aerospace Quality Management System Accreditation Suspension and/or Withdrawal

- a. The AB's management system shall provide procedures for the suspension and/or withdrawal of AQMS accreditation, where the CB has failed to meet the requirements of any part of this document or the requirements for accreditation. These procedures shall ensure that any AQMS suspension or withdrawal affects all AQMS standard accreditations. If ISO 9001 accreditation is suspended by an AB, then all AQMS standard accreditations (i.e., 9100, 9110, 9120) shall be suspended.
- b. The CBMC or SMS shall be notified within five calendar days by the AB, when accreditation is suspended or withdrawn from a CB. The AB, CBMC, or NAIA shall update the OASIS database within ten calendar days to reflect any change in CB accreditation status. The AB shall communicate withdrawal and the reasons for the action to all other IAQG recognized ABs. ABs shall ensure that loss of accreditation for ISO 9001 certification by a CB shall result in a decision for the immediate withdrawal of its accreditation for AQMS standard certification.
- c. The AB's management system shall provide for a decision to suspend the AQMS accreditation of a CB in the event any of the following specific conditions occur:
  - when all of the required annual assessments of a CB are not conducted;
  - when a CB is not correctly applying the definitions of nonconformity, as defined in 9101; or



- when a CB has not taken verifiable correction and corrective action that eliminates the cause of a nonconformity.
- d. An SMS or CBMC may recommend to the AB the suspension of a CB's accreditation. The reason for the suspension recommendation, together with supporting evidence, shall be made available to the AB by the SMS. The AB shall have a process to receive, review, and decide on the actions to be taken in response to the conditions present and supporting evidence provided. The AB shall undertake the actions necessary and shall record the outcomes.

The actions and relevant decision shall be communicated to the SMS or CBMC. This process shall be completed within 60 calendar days.

- e. When the accreditation of a CB having AQMS certification within its accredited scope is suspended, but not withdrawn/expired, the AB's management system shall ensure the following requirements are placed on the CB. The suspended CB shall:
- continue to perform required surveillance and recertification audits;
  - not conduct any Stage 1 audits for initial certification;
  - not conduct any scope extensions;
  - not accept any transfers of clients from other CBs;
  - obtain AB approval for each certificate (new or recertification) to be issued during the suspension period; and
  - notify all of its existing and applicant AQMS clients of its suspended status, and the consequences of such, within 15 calendar days of suspension.

The AB shall initiate the withdrawal process for AQMS accreditation for failure to conform to the above requirements.

- f. CB suspensions, including AQMS standards in the scope of accreditation, that exceed three months in duration shall be referred by the AB for review to the SMS or CBMC. AB suspensions of a CB shall not exceed six months from the date of the suspension decision. Where the reasons for the suspension are not resolved within the six month period, the AB shall determine whether the CB accreditation for all AQMS standards shall be withdrawn.
- g. Where the accreditation of a CB is withdrawn/expired, ABs shall provide for current AQMS standard certificates issued by the applicable CB to be eligible for transfer for a maximum of six months after the withdrawal/expiration date of the CB or until client AQMS standard certificate expiration, whichever is less; providing the certificate is eligible for transfer in accordance with IAF MD 2 and this document.

#### 5.3.8 Closure of Accreditation Body Issued Nonconformities

The AB's management system shall ensure that all nonconformities identified during assessment activities on CBs have been contained; satisfactorily corrected with root cause analysis; and the corrective action has been implemented, reviewed, accepted, and verified within 90 calendar days of the date that the nonconformity was raised.

If nonconformities are not closed within 90 calendar days, the AB shall initiate the process to suspend the CB's AQMS standard accreditation or in the case of initial application for AQMS standard accreditation, initiate a process to terminate further processing of the CB's application.

#### 5.3.9 Certification Body Re-application for Aerospace Quality Management System Accreditation

The ABs recognized by the ICOP scheme shall reject an application for AQMS accreditation for a minimum of 12 months after withdrawal or expiry due to nonconformance of accreditation by any ICOP recognized AB in accordance with the requirements of this document.

### 5.3.10 Aerospace Quality Management System Accreditation Records Retention

The AB's management system shall retain supporting evidence of the CB's accreditation for AQMS standards for a minimum of two accreditation cycles. Records relating to the current accreditation cycle shall be immediately available.

### 5.3.11 Complaint/Issue Resolution Process

The AB shall establish a complaint/issue resolution process. The process shall ensure:

- all complaints and issues are responded to within 30 calendar days;
- all feedback received is reviewed and, if a response is requested, the response is provided within 30 calendar days;
- if the AB determines that a short notice assessment is necessary, this assessment shall be completed within 90 calendar days of the complaint; and
- where applicable, an effective corrective action process that ensures containment activities, conformance to the applicable standard is re-established, root cause analysis is complete, corrective actions address all root causes identified, and a completion date for implementation of all corrective actions.

NOTE: The AB shall be responsible for resolution of complaints concerning the AB and CBs it has accredited. Complaints concerning the requirements of this document, which cannot be resolved by the AB, shall be referred to the SMS and CBMC, if applicable.

## 5.4 Accreditation Body Personnel Requirements

### 5.4.1 Accreditation Body Assessor Team Requirements

- a. AB assessor teams conducting CB office assessments and witness assessments shall demonstrate knowledge of the ICOP scheme (i.e., knowledge of all parts of the 9104-series standards requirements, knowledge of the relevant AQMS standards and ICOP resolutions) sufficient to be able to effectively judge conformity and be authorized by the AB as an ISO/IEC 17021 assessor.
- b. AB assessor teams who are witnessing audits of CBs in support of AQMS standards certification shall include assessors that fulfill work experience, AQMS training, and industry specific training, if required, in accordance with 9104/3 for the AQMS standard being assessed. In case of the lack of sufficient work experience, they can be supported by aviation, space, and defense industry experts that fulfill the work experience and industry specific training, if required, in accordance with 9104/3.

### 5.4.2 Accreditation Body Accreditation Decision Requirements

- a. The AB's accreditation function shall have a person(s) with aviation, space, or defense sector competence involved in the accreditation decisions of the AB.
- b. The aviation, space, and defense sector competence required for this role is defined as: knowledge of ISO/IEC 17011; ISO/IEC 17021; all parts of 9104-series standards applicable to ABs and CBs; 9101; and aviation, space, and defense industry knowledge of sufficient depth to be able to understand the sector specific terminology, processes, practices, and product requirements necessary to review and interpret the output(s) of AB assessors evaluating CBs operating in the sector.
- c. The AB shall document the specific competence requirements and maintain records demonstrating the attainment of these requirements by the decision-making staff.

## 6. REQUIREMENTS FOR CERTIFICATION BODIES

- 6.1 CBs seeking accreditation and subsequent recognition under this standard shall first be accredited to ISO/IEC 17021 and applicable IAF mandatory documents. The CB shall have been accredited for ISO 9001 certification for at least one year by an IAF MLA signatory AB, prior to submitting an application.

Until an applicant CB is accredited for AQMS certification, the CB shall not issue any AQMS standard certificates or make any contractual or other undertaking with a client that would imply that any AQMS certificate can be issued before a decision to grant accreditation to the CB by an AB has been undertaken. Any such undertaking shall be seen as bringing accreditation, the ICOP scheme, and the IAQG into disrepute and will result in a decision by the AB, SMS, or CBMC, if applicable, to withdraw the CB from the application process for AQMS certification for a period of not less than 12 months.

- 6.2 The CB shall maintain its ISO 17021 accreditation for ISO 9001 certification in order to maintain its AQMS standards accreditation. Suspension or loss of accreditation for ISO 9001 shall respectively result in the immediate suspension or withdrawal of a CB's accreditation for AQMS certification.
- 6.3 The CB's management team or committee for safeguarding impartiality shall have a person(s) with continuing aviation, space, or defense industry involvement through relevant work experience in the industry (i.e., involvement with aerospace manufacturing/maintenance, the NAA, NAIA, or equivalent).
- 6.4 A CB must complete the AB's initial accreditation process for the applicable AQMS standard prior to gaining recognition by the applicable SMS.
- 6.5 The CB's audit program shall ensure conformity to all stated requirements contained within 9101 and the 9104-series standards.
- 6.6 Requirements for CBs to obtain AQMS standards accreditation shall include at a minimum:
- a. The CB's certification function shall have a person(s) with aviation, space, or defense competence involved in the certification decisions of the CB. The minimum aviation, space, or defense competence required for this role is defined as knowledge of: ISO/IEC 17021, all parts of 9104-series standards applicable to CBs, 9101, and specific AQMS standard requirements; and aviation, space, or defense manufacturing industry knowledge of sufficient depth to be able to understand the sector specific terminology, processes, practices, and products necessary to understand and interpret the output of CB auditors auditing organizations for certification. The CB shall document all of the competence requirements in accordance with ISO/IEC 17021 and maintain records demonstrating the attainment of these requirements by the decision-making staff.
  - b. The CB shall utilize auditors that are both competent and authenticated as defined in ISO/IEC 17021, 9104/3, and this standard.
  - c. The CB shall have procedures, tools, and techniques in its system for the granting, maintaining, extending, reducing, suspending, transferring, and withdrawing of certification of audited organizations per ISO/IEC 17021, IAF MD 2, other applicable IAF mandatory documents, the AB's requirements, and this standard's requirements.
  - d. The CB shall document a process to obtain, review, and implement IAQG, SMS, and CBMC (if applicable) ICOP resolutions affecting the operation of the CB or the AQMS certification of its clients.
  - e. The CB shall agree to periodic surveillance and witness assessments by the accrediting AB and SMS, and shall actively engage in the AB and SMS assessment planning process.
  - f. CBs shall allow IAQG members, ABs, and regulatory agencies access to its facilities and records, as required, to ensure conformity to this document and to perform oversight assessments of the CB's processes and activities associated with this standard, and their accreditation and recognition as a CB

under the ICOP scheme. The 'right of access' shall include the witnessing of CB audits of organizations. The CB shall ensure this 'right of access' is contractually extended to the CB's client facilities and associated records.

NOTE: All oversight activities shall be conducted in accordance with 9104/2.

- g. The CB shall be responsible for ensuring audit data is entered into the OASIS database within 30 days from completion of the assessment or issuance of the AQMS certificate.
- h. The CB shall ensure that their clients have established an OASIS administrator for the purposes of managing: the organization data, access to organization audit results data in OASIS, organization OASIS users, and feedback data.

The administrator shall be identified and must be entered into OASIS, prior to the time of initial certification. The CB shall verify at all surveillance and recertification audits that the certified organization's current OASIS administrator is identified in the OASIS database.

The CB may suspend the client's certificate, during the surveillance cycle, or delay issuance of recertification should the client fail to maintain their OASIS administrator.

- i. The CB shall establish a complaint/issue resolution process. The process shall ensure:
  - all requests for corrective action are responded to within 30 calendar days from receipt of complaint;
  - all feedback received is reviewed and, if response requested, the response is provided within 30 calendar days from receipt of complaint;
  - if the CB determines that a short notice audit is necessary, this audit shall be completed within 90 calendar days from receipt of the complaint; and
  - an effective corrective action process that ensures containment activities, conformance to the applicable standard is re-established, completion of root cause analysis, corrective actions addressing all root causes, and a completion date for implementation of all corrective actions.

NOTE: The CB shall be responsible for the resolution of all complaints. Complaints that cannot be resolved by the CB shall be referred to the AB.

- j. Accredited CBs and any part of the same legal entity shall not have management system consultancy as part of their organization and shall not offer or provide quality management system or AQMS consultancy or any service to conduct internal audits for clients. For AQMS certification, the CB shall not certify a management system where there is an unacceptable relationship, as defined in ISO 17021, between any management system consultancy organization or any person or organization conducting internal audits and the CB, for a minimum period of two years following the end of the management system associated activities or where there is an unacceptable threat to the impartiality of the certification process.

NOTE: More than one pre-audit will be considered as consultancy.

- k. An accredited CB is responsible for ensuring the continued integrity and validity of the certificates it issues.
- l. An accredited CB shall ensure that the relevant requirements of this document are a part of the legally enforceable agreement with each client organization. Additionally, in the case of multiple site organizations, the legally enforceable agreement with the client will cover all of the sites within the scope of certification.

- 6.6 A CB who is voluntarily or involuntarily withdrawn from the ICOP scheme shall not reapply for AQMS standard accreditation for a minimum period of 12 months from the date of withdrawal. A

CB re-applying for accreditation shall follow the procedure as if they were a new CB making an initial application.

- 6.7 Advanced Surveillance and Recertification Procedures (ASRP) is allowed for the ICOP scheme. CBs must obtain AB approval, as outlined in IAF MD 3, and conform to the requirements of this document.
- 6.8 Computer Assisted Auditing Techniques (CAAT) is allowed, but not mandatory for the ICOP scheme. CBs must obtain AB approval, as outlined in IAF MD 4, and conform to the requirements of this document.
- 6.9 Prior to contracting for and conducting aerospace audits, CBs shall ensure that classified material or export control requirements, related to CB auditor access, are discussed with their aviation, space, and defense clients and included in the service contract and audit planning activities. Records of the discussion and agreements on auditor access shall be maintained.

The scope of certification shall not include processes that were not audited to sufficient depth to verify client conformance. Where processes are not audited and are excluded from the potential scope of certification, any such exclusion shall be limited to those processes that are permissible exclusions within the AQMS standard and that are effectively documented by the client. The CB shall not certify the client's quality management system, where the process exclusions do not represent permissible exclusions.

CBs shall ensure that any such controls are advised to ABs and Other Party (OP) assessors ahead of any planned witness assessments with sufficient time for AB and OP assessor organizations to review the control restrictions and make necessary arrangements.

- 6.10 CBs shall not allow requests by clients for auditor changes/substitutions without substantiated evidence of improper activity or contract violations. Conformance to rules concerning export controls, auditor nationalities, and confidentiality/conflict of interest challenges shall be an exception to this requirement. CBs shall be able to assign and rotate auditors, as available.

## **7. REQUIREMENTS FOR AUDITORS**

- 7.1 AQMS auditor competency, evaluation, authentication, and re-authentication requirements are described in 9104/3. The evaluation, authentication, and re-authentication process for either an AA or AEA shall be in conformance with 9104/3 and the requirements of this document.
- 7.2 AQMS auditor competency is gained through a combination of AQMS auditor training; industry specific training; aviation, space, or defense work experience; and audit experience.
- 7.3 Evaluation, authentication, and re-authentication of AQMS auditors are performed by an AAB approved by the SMS.
- 7.4 An auditor authenticated in one IAQG sector shall be accepted by the other sectors.
- 7.5 Auditors who are withdrawn for cause by an AAB are not allowed to re-apply for authentication for 12 months in any sector of the ICOP scheme.
- 7.6 An auditor not informing an AAB of a previous rejection, suspension, or withdrawal in another SMS is cause for withdrawal.

## **8. REQUIREMENTS FOR AUDITS AND REPORTING**

- 8.1 Aerospace Audit Teams
  - 8.1.1 CBs shall ensure conformity to all stated requirements contained within 9101.

- 8.1.2 The audit team leader shall be an AEA; qualified and authenticated for the appropriate AQMS standard. The audit team can include other AQMS auditors, as required. An audit team leader shall be present and participate in the entire certification cycle including Stage 1, Stage 2, surveillance, recertification, and special audits.

When auditing multiple site organizations, the CB and audit team leader shall ensure that an AEA is on-site at each site during the entire auditing activities. In addition, the audit team leader shall be on-site at one or more sites during all auditing activity.

- 8.1.3 The audit team shall be appointed and shall have the totality of demonstrated competencies required to effectively audit each site of the organization. The audit team's background shall be sufficient to ensure that audit team members understand the requirements relating to the system they are auditing. Each member of the audit team shall have a general understanding and background knowledge in the technological and industrial sector in which it operates.

In certain instances, particularly where there are critical requirements and special processes, the background knowledge of the audit team may be supplemented by an organization briefing, specific training, or experts (e.g., subject matter or technical experts from industry or professional institutions) in attendance. If a CB does use subject matter or technical experts, its system shall include details of how these experts are selected and how their technical knowledge is assured on a continuing basis.

- 8.1.4 The audit team leader shall ensure that all members of the audit team are aware of the requirements of this document, as it can affect the scope of their audit activity. Additionally, the AEAs shall provide guidance to the audit team throughout the audit on the interpretation of aviation, space, and defense requirements and, when requested, the significance of any issues identified.

- 8.1.5 The audit team leader shall be responsible for ensuring the completeness of the audit and the accuracy of the audit report, findings, and conclusions.

- 8.1.6 The same audit team leader shall be limited to a maximum of two consecutive certification cycles at the client organization. Rotation of supporting AEAs and auditors after certification cycles is recommended.

- 8.1.7 ABs, OP assessors, regulatory agencies, or customer representatives may accompany the audit team as observers of the audit process at any time. When customer or government representatives are accompanying as observers in the audit, the audit team leader shall have the option of including in the audit report any comments/concerns brought forward by these representatives.

## 8.2 Duration of the Audit

The minimum duration for initial, surveillance, and recertification audits are shown in Table 2. No reductions from Table 2 audit duration days are allowed for the ICOP scheme. Increases to the audit duration days are allowed and expected for areas with identified risk, complexity, or increased scope.

This standard meets the minimum requirements defined in IAF MD 5. Where there is a conflict between this document and IAF MD 5, this standard shall take precedence.

### 8.2.1 Minimum Auditor Person Days

Requirements are established by this standard for minimum auditor-person days (i.e., initial, surveillance, and recertification audits) appropriate to the size of the organization being audited. For global aviation, space, and defense organizations, the required audit days from Table 2 shall be increased, as appropriate, taking into account the complexity of the quality management system and the number and/or variety of activities.

Additionally, audit activity for corrective action verifications or the use of translators to address language issues shall increase on-site audit time. Justification for the required audit days determined shall be documented and a record maintained. The Table 2 auditor days requirements defined herein shall not be reduced.

NOTE: It should be noted that attempts to reduce audit days below the minimum days defined in Table 2 shall result in certification data being blocked from entry into the OASIS database.

Number of Employees	9100 / 9110			9100 / 9110 Less Design (7.3)			9120		
	Initial	Annual Surveillance	Recertification	Initial	Annual Surveillance	Recertification	Initial	Annual Surveillance	Recertification
1-5	2.0	1.0	2.0	2.0	1.0	1.5	2.0	1.0	1.5
6-10	2.5	1.0	2.0	2.5	1.0	2.0	2.0	1.0	1.5
11-15	3.0	1.5	2.5	2.5	1.0	2.0	2.5	1.0	2.0
16-25	3.5	1.5	3.0	3.0	1.5	2.5	3.0	1.5	2.0
26-45	5.0	2.0	4.0	4.5	2.0	3.5	4.0	2.0	3.0
46-65	6.0	2.5	4.5	5.0	2.0	4.0	4.5	2.0	3.5
66-85	7.0	3.0	5.5	6.0	2.5	4.5	5.5	2.5	4.0
86-100	8.0	3.0	6.0	7.0	3.0	5.0	6.0	2.5	4.5
101-125	8.5	3.5	6.5	7.5	3.0	5.5	6.5	3.0	5.0
126-175	9.5	4.0	7.0	8.0	3.5	6.0	7.5	3.0	5.5
176-275	10.5	4.0	8.0	9.0	3.5	6.5	8.0	3.5	6.0
276-425	12.0	5.0	9.0	10.0	4.5	7.5	9.0	4.0	7.0
426-625	13.0	5.5	9.5	11.0	4.5	8.0	10.0	4.5	7.5
626-875	14.0	5.5	10.5	12.0	5.0	8.5	10.5	4.5	8.0
876-1000	15.0	6.0	11.0	12.5	5.0	9.0	11.5	5.0	8.5
1001-1175	16.0	6.5	12.0	13.5	5.5	10.0	12.5	5.5	9.5
1176-1550	17.0	7.0	12.5	14.5	6.0	11.0	13.0	5.5	10.0
1551-2025	18.0	7.0	13.5	15.0	6.0	11.5	13.5	5.5	10.5
2026-2675	19.0	7.5	14.0	16.0	6.5	12.0	14.5	6.0	11.0
2676-3450	20.0	8.0	14.5	17.0	7.0	12.5	15.0	6.0	11.0
3451-4350	21.0	8.0	15.5	17.5	7.0	13.0	16.0	6.5	11.5
4351-5450	22.0	8.5	16.0	18.5	7.5	13.5	16.5	6.5	12.0
5451-6800	23.0	9.0	16.5	19.0	7.5	14.0	17.0	7.0	12.5
6801-8500	24.0	9.0	17.5	20.0	8.0	14.5	18.0	7.0	13.0
8501-10700	25.0	9.5	18.0	21.0	8.0	15.0	18.5	7.5	13.5
10701-14564	26.0	10.0	18.5	21.5	8.5	15.5	19.5	7.5	14.0
14565-19630	27.0	10.0	19.5	22.5	8.5	16.0	20.0	8.0	14.5
19631-24695	28.0	10.5	20.0	23.0	9.0	16.5	20.5	8.0	15.0
24696-33571	29.0	11.0	20.5	24.0	9.0	17.0	21.5	8.5	15.5
33572-45031	30.0	11.0	21.5	25.0	9.5	17.5	22.0	8.5	16.0
45032-59258	31.0	11.5	22.0	25.5	9.5	18.5	23.0	9.0	16.5
59259-79784	32.0	12.0	22.5	26.5	10.0	19.0	23.5	9.0	17.0
79785-101635	33.0	12.0	23.5	27.0	10.0	19.5	24.0	9.0	17.5

NOTE 1: This table includes both AQMS standard and ISO 9001 audit day requirements; requirements are consistent with IAF MD 5.

NOTE 2: For organizations with employees greater than 101635, follow the defined progression.

TABLE 2 – AUDITOR DAYS TABLE

8.2.2 Audit Day Activity Requirements

- a. Audit time in Table 2 includes Stage 1 and Stage 2 activities. Table 2 represents minimum on-site audit time from the opening meeting to the closing meeting.
- b. Table 2 audit time does not include non-audit time (e.g., travel, meals, extended break times).
- c. Table 2 is for on-site audit time only. Table 2 does not include auditor time used for planning, report writing, and/or completion of the 9101 forms.
- d. An audit day is a normal working day of eight hours. The number of audit days cannot be reduced by programming longer hours per workday (e.g., five audit days of eight hours cannot be executed as four audit days of ten hours).
- e. Auditing of the entire AQMS standard on all shifts is required for initial and recertification. For surveillance audits, the planning shall include coverage of multiple shifts.
- f. Shift auditing whereby a longer day is planned; cannot reduce required audit days.
- g. Audit days for organizations requesting certification to multiple AQMS standards:
  - For initial certification, the audit duration shall be determined using the auditor days defined in Table 2, as described below:
    - The CB shall determine which AQMS standard is the primary standard and which AQMS standard is secondary, based on the number of employees working in the activities covered by the applicable standards.
    - For initial certification, the audit duration shall be the required days for an initial audit to the primary standard plus the required days for recertification to the secondary standard (see Table 3 for audit day determination of the example provided below).

Example: Organization ABC performs both manufacturing and maintenance activities. 100 of the organization’s employees are engaged primarily in manufacturing and 25 of their employees are engaged primarily in maintenance. Organization ABC’s primary standard would be 9100 and their secondary standard would be 9110.

Number of Employees	9100 / 9110			9100 / 9110 Less Design (7.3)			9120		
	Initial	Annual Surveillance	Recertification	Initial	Annual Surveillance	Recertification	Initial	Annual Surveillance	Recertification
1-5	2.0	1.0	2.0	2.0	1.0	1.5	2.0	1.0	1.5
6-10	2.5	1.0	2.0	2.5	1.0	2.0	2.0	1.0	1.5
11-15	3.0	1.5	2.5	2.5	1.0	2.0	2.5	1.0	2.0
16-25	3.5	1.5	3.0	3.0	1.5	2.5	3.0	1.5	2.0

TABLE 3 – AUDIT DAY TABLE EXAMPLE FOR MULTIPLE AEROSPACE QUALITY MANAGEMENT SYSTEM STANDARDS

- For an organization already having an existing 9100 certificate that wants to extend their scope of certification to another AQMS standard during surveillance, the audit duration shall be the required audit days for surveillance of their current certificate plus the required days for recertification of the



new standard (see Table 4 for audit day determination of the example provided below).

Example: Organization EFG is currently certified for 9100 (manufacturing) and is seeking certification for 9110 (maintenance) during their next surveillance audit. 100 of the organization’s employees are engaged primarily in manufacturing and 25 of their employees are engaged primarily in maintenance.

Number of Employees	9100 / 9110			9100 / 9110 Less Design (7.3)			9120		
	Initial	Annual Surveillance	Recertification	Initial	Annual Surveillance	Recertification	Initial	Annual Surveillance	Recertification
1-5	2.0	1.0	2.0	2.0	1.0	1.5	2.0	1.0	1.5
6-10	2.5	1.0	2.0	2.5	1.0	2.0	2.0	1.0	1.5
11-15	3.0	1.5	2.5	2.5	1.0	2.0	2.5	1.0	2.0
16-25	3.5	1.5	3.0	3.0	1.5	2.5	3.0	1.5	2.0

TABLE 4 – AUDIT DAY TABLE EXAMPLE FOR ADDING AN AEROSPACE QUALITY MANAGEMENT SYSTEM STANDARD

- For surveillance of organizations certified to multiple AQMS standards, the audit days shall be determined by the number of employees primarily engaged in activities associated to the applicable standards (see Table 5 for audit day determination of the example provided below).

Example: Organization JKL performs both manufacturing and maintenance activities. 100 of the organization’s employees are engaged primarily in manufacturing and 25 of their employees are engaged primarily in maintenance. Organization JKL’s primary standard would be 9100 and their secondary standard would be 9110.

Number of Employees	9100 / 9110			9100 / 9110 Less Design (7.3)			9120		
	Initial	Annual Surveillance	Recertification	Initial	Annual Surveillance	Recertification	Initial	Annual Surveillance	Recertification
1-5	2.0	1.0	2.0	2.0	1.0	1.5	2.0	1.0	1.5
6-10	2.5	1.0	2.0	2.5	1.0	2.0	2.0	1.0	1.5
11-15	3.0	1.5	2.5	2.5	1.0	2.0	2.5	1.0	2.0

TABLE 5 – AUDIT DAY TABLE EXAMPLE FOR SURVEILLANCE OF MULTIPLE AEROSPACE QUALITY MANAGEMENT SYSTEM STANDARDS

- h. If a Stage 1 audit is determined to be necessary during recertification, additional audit days shall be added to the required audit days defined in Table 2.

### 8.2.3 Multiple Site Organization Audit Activity Requirements

8.2.3.1 Multiple site organizations shall comply with the requirements of IAF MD 1 and the additional requirements defined in this document. The term “processes” referred to throughout IAF MD 1 are those processes that the multiple site organization has determined to be needed for the quality management system (see section 4.1 of the applicable AQMS standard), which include processes required for management activities, provision of resources, product realization, measurement, analysis, and improvement.

IAF MD 1 Section 0.4 is not applicable for aviation, space, and defense organizations. Additionally, ‘temporary sites’, as defined in IAF MD 1, shall not be included in the scope of AQMS certificates. Aviation, space, and defense organizations with multiple design, production, and/or service sites are an example of a possible multiple site organization in addition to those identified in IAF MD 1 (see Application – Multi-site Organization).

8.2.3.2 For 9100 and 9110 certification, this document defines two categories for multiple site organizations (see Table 6).

- Category 1 – organizations meet the minimum eligibility requirements of IAF MD 1; however, they do not meet the minimum eligibility requirements of IAF MD 3.
- Category 2 – organizations meet the minimum eligibility requirements of IAF MD 1 and IAF MD 3.

In addition to the auditor competence requirements of IAF MD 3 and ISO 19011 (see Competence and Evaluation of Auditors), the internal auditors (for a Category 2 organization) in the organization’s centralized Internal Audit function conducting AQMS audits shall meet as a minimum the AA requirements of 9104/3 and the internal AQMS audit function shall be led by an individual meeting the requirements of an AEA. Internal auditors and the leader of the internal audit function are not required to be authenticated AAs and AEAs; the intent is for these individuals to meet the training and work experience requirements, as a minimum.

### 8.2.3.3 Initial Audit

The initial audit of a multiple site organization, supporting a single certificate, shall be conducted by auditing each site to the complete and applicable AQMS standard requirements, prior to certificate issuance. Audit-person days shall comply with Table 2 and be calculated using each site’s population and corresponding column for “Initial” audit.

Example: Initial audit for a design responsible organization seeking 9100 certification with four sites. One site with the design responsible central function having 100 employees (site 1), another design responsible site with 100 employees (site 2), and two additional non-design responsible sites with 200 employees (sites 3 and 4).

- The total initial audit duration would be:  
 $8.0 \text{ (site 1)} + 8.0 \text{ (site 2)} + 9.0 \text{ (site 3)} + 9.0 \text{ (site 4)} = 34.0 \text{ days.}$

### 8.2.3.4 Surveillance and Recertification Audit

- a) For 9120 certification only, sampling of multiple site organizations is allowed for surveillance and recertification, and shall comply with the sampling requirements in IAF MD 1 and be limited to sites located in the same country.
- b) For 9100 and 9110, sampling of sites is only permitted as set out in Table 6.

8.2.3.5 For recertification of a multiple site organization that meets the Category 1 criteria, audits shall be conducted at the central function and each site be audited to the complete and applicable AQMS standard requirements. Audit-person days shall comply with Table 2 and be calculated using each site’s population and corresponding column for “Recertification” audit.

Example: Recertification audit for a design responsible organization seeking 9100 certification with four sites. One site with the design responsible central function having 100 employees (site 1), another design responsible site with 100 employees (site 2), and two additional non-design responsible sites with 200 employees (sites 3 and 4).

- o The total recertification audit duration will be:  
6.0 (site 1) + 6.0 (site 2) + 6.5 (site 3) + 6.5 (site 4) = 25 days.

Category	Organization Scope	Audit Frequency NOTE: See Table 2 for audit day calculations.
1	Meets the eligibility requirements of IAF MD 1 for sampling; and Does not meet the eligibility requirements of IAF MD 3 for advanced surveillance.	Annual Surveillance – Years 1 and 2 o Year 1 – Central function and approximately 50% of sites. o Year 2 – Central function and remaining sites not audited in Year 1.  Recertification – Year 3 o Central function and all sites.
2	Meets the eligibility requirements of IAF MD 1 for sampling; and Meets the eligibility requirements of IAF MD 3 for advanced surveillance.	Annual Surveillance and Recertification o Year 1 – Central function and approximately 33% of sites. o Year 2 – Central function and approximately 50% of sites not reviewed in Year 1. o Year 3 – Central function and remaining sites not reviewed in Year 1 or 2.  Audit plan shall ensure that the maximum duration between each site’s audit schedule is not greater than 48 months.

TABLE 6 – MULTIPLE SITE ORGANIZATION – AUDIT FREQUENCY

8.2.3.6 For surveillance of a multiple site organization that meets the Category 1 criteria, the CB’s audit program shall ensure that each site is audited at least once during the surveillance audit cycle. In addition, the central function shall be audited each year of the surveillance audit cycle. Audit-person days shall comply with Table 2 and be calculated using each site’s population and corresponding column for “Annual Surveillance” audit.

Example: Surveillance audit for a design responsible organization maintaining a 9100 certificate with four sites. The central function with design responsibility having 100 employees (site 1), another design responsible site with 100 employees (site 2), and two additional non-design responsible sites with 200 employees (sites 3 and 4).

- o The total duration year 1 will be: 3.0 (site 1) + 3.0 (site 2) = 6.0 days.
- o The total duration year 2 will be: 3.0 (site 1) + 3.5 (site 3) + 3.5 (site 4) = 10.0 days.

It is recognized that not all processes are performed at all multiple site organization locations. Once the total audit days are determined for the Category 1 multiple site organization, the CB’s audit program can reduce audit days at one site and increase audit days at another site, as long as, the total audit days calculated is maintained. No site’s audit days shall be reduced by more than 33%.

8.2.3.7 For surveillance and recertification of a multiple site organization that meets the Category 2 criteria, the central function shall be audited during surveillance in years one and two, and during recertification prior to certificate expiration in the third year. The CB’s audit program

shall ensure that each site is audited at least once every 36 months to the applicable AQMS standard requirements for each site and ensure that all applicable quality management system processes are audited annually. For surveillance audits, audit-person days for multiple site organizations that meet the Category 2 criteria shall comply with Table 2 and be calculated using each site's population and the corresponding column for "Recertification" audit. The recertification audit shall ensure coverage of all clauses and requirements of the applicable AQMS standards.

Example: Surveillance and recertification audits for a design responsible organization maintaining a 9100 certificate with four sites. The central function with design responsibility having 100 employees (site 1), another design responsible site with 100 employees (site 2), and two additional non-design responsible sites with 200 employees (sites 3 and 4).

- The year 1 surveillance audit duration will be: 6.0 (site 1) + 6.0 (site 2) = 12 days.
- The year 2 surveillance audit duration will be: 6.0 (site 1) + 6.5 (site 3) = 12.5 days.
- The year 3 recertification audit duration will be: 6.0 (site 1) + 6.5 (site 4) = 12.5 days.

The CB shall evaluate the agreed performance indicators in accordance with IAF MD 3 and add additional audits and/or audit days at problematic sites that over time fail to meet the agreed performance targets; the audit time shall be added to the time listed above.

It is recognized that not all processes are performed at all multiple site organization locations. Once the total audit days are determined for the multiple site organization that meets the Category 2 criteria, the CB's audit program can reduce audit days at one site and increase audit days at another site, as long as, the total audit days calculated is maintained. No site's audit days shall be reduced by more than 50%.

8.2.4 The audit program shall be defined and available at the start of the surveillance cycle. In addition, the CB shall ensure that any significant changes that impact audit days are reviewed each year to determine if changes to the audit program are required.

8.2.5 Upgrading from ISO 9001 to an Aerospace Quality Management System Standard

When auditing organizations who have an existing ISO 9001 certificate and are upgrading to an AQMS standard, a full initial audit (Stage 1 and Stage 2) of all requirements of the applicable AQMS standard requirements (ISO 9001 and aviation, space, and defense industry additional requirements) using 9101 is required. Initial audit time per Table 2 shall be used.

8.3 Nonconformities

a. The audit team shall record any nonconformity identified during an audit.

NOTE: The 9101 standard contains the definitions for major and minor nonconformity.

b. No certificates or approvals to AQMS standards or any combination of AQMS standards with ISO 9001 shall be issued, unless all major and minor nonconformities have been contained; satisfactorily corrected with root cause analysis; and the corrective action has been implemented, reviewed, accepted, and verified by the CB. This requirement also applies to the issuance of a certificate after the transfer to another CB.

c. Nonconformity management requirements are contained in 9101.

d. The CB shall initiate the client certification suspension process when an organization fails to demonstrate that conformance to the applicable standard has been re-established within 60 days from the issuance of a nonconformance report.

#### 8.4 Audit Team Conclusions and Reporting

- a. The audit team leader shall provide the organization with all nonconformity reports at the closing meeting. The audit team leader shall present the audit report to the organization within two weeks of the closing meeting using the audit report and associated forms defined in 9101. As a minimum, the audit report shall state its conclusions on conformity, effectiveness of the quality management system to the AQMS standard's requirements, and the objectives established for the audit in accordance with 9101.
- b. For surveillance and special audits, the audit team leader shall advise whether recorded nonconformities jeopardize an existing certificate. In the event that certification is suspended, an appropriate course of action shall be agreed between the organization and the CB. Where there is a failure to agree on a course of action, the appropriate appeals procedure of the CB shall be invoked.
- c. For initial and recertification audits, the CB shall be responsible for the input of the audit report into the OASIS database within one month after the certificate issue date. For surveillance and special audits, the CB shall submit the audit report into the OASIS database within one month after the corrective action closure date or visit date, if no corrective action is required. This entry in OASIS can be performed either directly by the CB or through the SMS, in accordance with the arrangements defined by the sector or NAIA. The information to be included in the data input is defined in Appendix A.
- d. All data on the certificate shall be in the OASIS public domain. Details of the audits shall only be available in OASIS to those users granted access by the organization; this information shall not be used by IAQG members for the purpose of competitive advantage.

NOTE: All data in OASIS shall be available to ABs for the purpose of oversight.

- e. The CB shall inform the organization of the requirement to appoint an OASIS administrator, who shall maintain in OASIS the following data:
  - organization name, address, and locations included on the certification;
  - the name and address of the OASIS administrator; and
  - the organization's contact person, phone, fax, e-mail address, and website, as applicable.

NOTE: This data will be visible in the OASIS public domain (tier 1); available to all users.

- f. The CB shall leave copies of all information pertaining to the audit results [e.g., checklists, Objective Evidence Record (OER), findings, supporting documents, other correspondence] with the organization for the purpose of the organization sharing this information with their customers and potential customers. CBs shall ensure that organizations certified to an AQMS standard are contractually required to provide copies of the audit report and linked documents to their customers and potential customers, upon request. The organization may provide access to this data through OASIS or by providing the audit report directly to the customer.

#### 8.5 Issuance of Certificates

In addition to certification documentation requirements stated in ISO/IEC 17021 and applicable IAF mandatory documents, certificates issued by an AQMS accredited CB shall, at minimum, contain statements that address the following concepts:

- a. Conformity of the organizations quality management system to the requirements of ISO 9001 and/or the applicable AQMS standard version used (e.g., AS9100, prEN9110), including the revision level of the standards.
- b. The audit was performed in accordance with the requirements of the applicable version of this document, based on the sector standard publishing scheme (e.g., AS9104/1, EN9104/1), including the revision level of the standard; identify that the CB is accredited under the ICOP scheme.

NOTE: The sector-specific scheme reference (with revision) can be added, if applicable.

- c. Certificate issue date.
- d. Certificate expiration date; the maximum term for which a certificate is valid is three years. There are no extensions allowed to a three year certificate.
- e. The scope of certification for the certified organization shall clearly describe the organization's activities with respect to design, product (including services), process, etc.
- f. For multiple site organizations, the scope of certification shall clearly describe the above activities applicable at each site.
- g. Unaccredited certificates shall not be issued. Letters of conformance and unaccredited audit statements shall be clearly distinguishable from accredited certificates.
- h. In the case of marks or logos misuse by a CB (accredited by an ICOP scheme approved AB), the AQMS standard(s) accreditation of the CB shall be suspended or withdrawn.
- i. The text on the certificate posted in OASIS shall be in English. Text in the national language may be added (bi-lingual certificate) at the issuer's discretion.

NOTE: The above statements are not intended to be pro-forma words, the CB shall establish certificate wording to address the above concepts. If necessary, separate certificates [i.e., one for ISO 9001 and another for the AQMS standard(s)] could be issued provided the certificates are linked. The certificate may show the logos or symbols of the SMS recognized National Accreditation Body (NAB) who accredited the CB, as well as, the NAIA or SMS organizations.

## 8.6 Loss of Certification

- 8.6.1 When the IAQG OEM detects systemic nonconformities during their regular surveillance activities (e.g., process audits, product audits), the OEM can request the CB to perform additional surveillance activities through the applicable SMS. This could result in the suspension or withdrawal of certification for an organization. If the CB cannot agree with the OEM, the matter shall be referred to the SMS.
- 8.6.2 CBs shall arrange for the OASIS database to be updated when an organization's AQMS standard certificates are suspended or withdrawn. This can be performed either directly by the CB or by the OASIS database administrator.

## 8.7 Transfer of Certificates

IAF MD 2 is applicable in full, with the following additional requirements:

- Only valid certifications issued under the 9104-series standards ICOP scheme by a CB with a valid accreditation are eligible for transfer.
- No certificate transfer between CBs shall occur when the CB with the existing certificate has nonconformities documented that are awaiting corrective action closure and current CB acceptance, unless the current CB has ceased its activities.
- Transfer of existing certificates expiring within the next 12 months shall require a Stage 1 and Stage 2 audit.
- The accepting CB shall ensure that prior to certificate issuance, a special audit (on-site) is carried out by an AEA to confirm the validity of the transferred certification.
- A new certificate shall not be issued, unless all minor and major nonconformities have been contained and satisfactorily corrected; the root cause analysis completed; and corrective action has been

implemented, reviewed, accepted, and verified by the accepting CB. If the closure of nonconformities takes more than 90 days, transfer is not allowed.

- Review/verification of the corrective action by the accepting CB shall take place on-site (except for corrective actions related to AQMS documentation).

#### 8.8 Advanced Surveillance and Recertification Procedures

- a. ASRP is allowed for certification of single sites and shall only be used for certification of multiple sites meeting Category 2, as indicated in Table 6. In no case shall ASRP reduce on-site audit days by more than 30% of the Table 2 audit day requirements.
- b. When a CB and its client opt to use ASRP, conformance to IAF MD 3 is mandatory and they must be able to demonstrate eligibility and conformity to the AB.

#### 8.9 Computer Assisted Auditing Techniques

- a. The use of CAAT is not mandatory, but if a CB and its client opt to use CAAT, it is mandatory that they conform to IAF MD 4 and are able to demonstrate conformity to the AB.
- b. The CAAT process outlined in IAF MD 4 shall not reduce the Table 2 required on-site audit days by more than 30%.
- c. The combined use of CAAT and ASRP shall not reduce the Table 2 required on-site audit days by more than 40%.

### 9. REQUIREMENTS FOR OVERSIGHT PROCESS

- a. The process for oversight of the AQMS standard certification program (ICOP scheme) is described in 9104/2. Participating IAQG member companies, IAQG OPMT, SMS, CBMCs, OP assessors, ABs, CBs, AABs, TPABs, and training providers shall ensure conformance with the requirements defined in 9104/2.
- b. All IAQG OPMT, SMS, CBMC members, and OP assessors shall complete an ICOP declaration form (see 9104/2 appendices) and submit it to the applicable chairperson (e.g., OPMT member shall submit to OPMT Chairperson), prior to membership or assignment. The applicable chairperson shall retain copies of all completed declaration forms until the membership is expired.
- c. When deemed appropriate by an AB, SMS representative, and/or CB, they may share the results of aerospace witness assessments and associated data of an auditor competency issue with the AAB responsible for the subject auditor's aerospace authentication.

### 10. REQUIREMENTS FOR AUDITOR AUTHENTICATION BODIES

#### 10.1 General

The responsibilities of the AAB shall be granting, maintaining, suspending, extending, and withdrawing approval and/or certification of auditors (i.e., AA, AEA) as defined in 9104/3. The AAB shall present auditor approval and/or certification decisions to the SMS for recognition.

The AAB shall agree to periodic surveillance by the applicable SMS. The AAB shall provide the 'right of access' to IAQG member companies, the IAF, and regulatory or government bodies for the purpose of establishing that the correct criteria and methods were used in the approval and/or certification of AQMS auditors. This access will include information and records pertaining to oversight of the AAB by other parties.

## 10.2 Organizational Requirements for Auditor Authentication Bodies

- a. AABs shall have a defined quality management system.
- b. The AAB shall work with the applicable IAQG sectors to give assurance that auditors continue to perform in a manner consistent with the requirements contained herein and other applicable ICOP scheme process documentation (e.g., 9104/2, 9014/3, 9101).

## 10.3 Quality Management System Requirements for Auditor Authentication Bodies

- a. The AAB shall have procedures, tools, and techniques in its system in accordance with the requirements of ISO 17024 and this document for granting, maintaining, suspending, extending, and withdrawing approval and/or certification of auditors (i.e., AA, AEA).
- b. AABs shall evaluate each auditor application against the auditor authentication requirements outlined in 9104/3. Based on this review, AABs shall make a recommendation whether to authenticate an auditor. The AAB shall notify the auditor of their decision.
  - If the requirements for an auditor are satisfied, this recommendation shall be forwarded to the applicable SMS auditor recognition function along with supporting data (e.g., application, documented evidence of training and work experience, applicant's resume).
  - If the SMS concurs with a recommendation for authentication, the AAB shall upload the appropriate data into the OASIS database and notify the auditor of authentication. If the SMS does not concur with the recommendation for authentication, it shall notify the AAB of the specific reasons for the divergence and the AAB shall notify the auditor of the SMS decision.

The decision to grant authentication or re-authenticate an AA or AEA applicant, or subsequently maintain, suspend, extend, or withdraw authentication shall be made by the SMS or AAB on the basis of information and objective evidence gathered to support the decision.

- c. Those who make the decision to grant, maintain, extend, or withdraw authentication shall not have participated in the training, work experience, or any evaluation of the auditor, including any witness audits. Furthermore, they shall not have any personal, contractual, voluntary, or formal relationship with the applicant that would present a potential conflict of interest to the impartiality of the decision.
- d. AABs shall have an appeal/complaint issue resolution process in support of the SMS auditor recognition function. The AAB shall facilitate all auditor appeals with the SMS.
- e. When an AAB receives an application to authenticate an auditor outside of its normal region (i.e., country, sector), the AAB shall recommend the auditor seek authentication through the ICOP recognized AAB operating in the auditor's region. AABs involved in authenticating an auditor outside of its normal region (i.e., country, sector) shall require the auditor applicant disclose to the AAB any previous AQMS auditor authentication/approval or certification, or any applications that were rejected in another country, region, or sector.

## 10.4 Auditor Competency

- a. The AAB shall have a process to receive, review, and determine actions to be taken in response to identified auditor competency issues. Process records shall be maintained.

The decision and/or action taken shall be communicated to the initiator. This process shall be completed within 60 calendar days.

- b. Where an auditor competency issue (associated to AQMS certification audits) is identified and deemed appropriate by an AB, SMS, and/or CB; the results of aerospace witnessed audits and/or associated data shall be shared with the AAB responsible for the subject auditor's aerospace authentication. The AAB shall investigate the issue and take appropriate action.



- c. An SMS may recommend the withdrawal of an AQMS auditor's authentication based on an auditor competency issue. The reason for the recommendation and supporting evidence shall be made available to the AAB. The AAB shall investigate the issue and take appropriate action.

#### 10.5 Use of Auditor Authentication Bodies Marks and Logos

AABs shall provide for the assessment on the use of AAB's marks and logos for approval/certification documents associated to the ICOP scheme.

#### 10.6 Maintenance, Suspension, Extension, and Withdrawal of Auditor Approval/Certification

- a. The AABs shall provide procedures for the maintenance, suspension, extension, and withdrawal of auditor authentication. These procedures shall ensure that any auditor suspension or withdrawal, due to a failure to satisfy the requirements of the ICOP scheme, is reviewed to determine relevance of all AQMS standard approval/authentication/certification held by the auditor.
- b. All auditors that have their AQMS standard approval/authentication/certification withdrawn for a reason other than inactivity or lack of renewal shall not be permitted to reapply for approval/authentication/certification for a minimum of 12 months after withdrawal.
- c. The applicable SMS auditor recognition function shall be notified within five calendar days by the AAB, when AQMS approval/certification is withdrawn for a reason other than inactivity or lack of renewal. The AAB shall update the OASIS database within ten calendar days to reflect the auditor withdrawal.

#### 10.7 Auditor Approval/Certification Record Retention

The AABs shall retain supporting evidence of auditor authentications for a minimum of two approval/certification cycles. Records relating to the current authentication cycle shall be readily retrievable.

### 11. REQUIREMENTS FOR TRAINING PROVIDER APPROVAL BODIES

#### 11.1 General

The responsibilities of the TPAB shall be granting, maintaining, suspending, extending, and withdrawing approval of training providers, as defined in 9104/3; and the approval of associated training courses. Approval of industry specific courses shall be reviewed and concurred with by the SMS auditor recognition function.

The TPAB shall agree to periodic surveillance by the applicable SMS. The TPAB shall provide the 'right of access' to IAQG member companies, the IAF, and regulatory or government bodies for the purpose of establishing that the correct criteria and methods were used in the approval of AQMS training providers and training courses. This access will also include information or records pertaining to oversight of the TPAB by other parties. Furthermore, the TPAB shall provide for the 'right of access' to all approved AQMS training providers and training course developers, including the right to conduct oversight of AQMS training classes.

NOTE: Any OP assessor conducting oversight of a training class shall not receive credit for class attendance or participation, and shall not provide any input into any training class attended.

#### 11.2 Organizational Requirements for Training Provider Approval Bodies

- a. TPABs shall have a defined quality management system.
- b. The TPAB shall work with the applicable IAQG sectors to give assurance that training providers continue to perform in a manner consistent with the requirements contained herein and the ICOP scheme.

### 11.3 Management System Requirements for Training Provider Approval Bodies

- a. The TPAB shall have procedures, tools, and techniques in its system for granting, maintaining, suspending, extending, and withdrawing approval of training providers and training courses.
- b. TPABs shall review each training provider application against the training provider approval requirements outlined in 9104/3. TPABs shall only approve the training provider, if these requirements are satisfied.
- c. The decision to approve a training provider or subsequently maintain, suspend, extend, or withdraw the approval of a training provider shall be made by the TPAB or SMS on the basis of information and objective evidence gathered to support the decision.
- d. Those who make the decision to approve, maintain, extend, or withdraw approval of training providers shall not have participated in the development or maintenance of the management system (including internal audits of the training provider); delivered training on behalf of that training provider; or have any personal, contractual, voluntary, or formal relationship with the training provider that would present a potential conflict of interest to the impartiality of the decision.
- e. Upon approval, the TPAB shall upload the appropriate data into the OASIS database and notify the training provider of approval. If the review determines the training provider does not meet the requirements outlined in 9104/3 for approval, the TPAB shall notify the training provider of the reasons for disapproval.
- f. As required to support industry specific training course reviews by the SMS, TPABs shall have an appeal/complaint resolution process in support of the SMS training provider recognition function. The TPAB shall facilitate all training provider appeals with the SMS.
- g. When a TPAB receives an application to approve a training provider outside of its normal region (i.e., country, sector), the TPAB shall recommend the training provider seek approval through the ICOP recognized TPAB operating in the training provider's region. TPABs involved in approving/certifying a training provider outside of its normal region shall require the training provider disclose if the training provider has had any approvals or applications rejected in another region.
- h. The TPABs management system shall provide procedures for the maintenance, suspension, extension, and withdrawal of training provider approval. These procedures shall ensure that any training provider suspension or withdrawal, due to a failure to satisfy the requirements of the ICOP scheme, is reviewed to determine relevance to all AQMS course approvals held by the training provider. Furthermore, all training providers that have their AQMS training course approval withdrawn shall not be permitted to reapply for approval for a minimum of 12 months after withdrawal.

## 12. ONLINE AEROSPACE SUPPLIER INFORMATION SYSTEM DATABASE

- 12.1 The IAQG OPMT shall be responsible for the functionality of the OASIS database.

NOTE: All stakeholders can initiate a change proposal to the IAQG. The OASIS 'Help/Guidance' function contains details on how to process such a proposal.

- 12.2 CBs shall not be able to publish certificates (i.e., initial, recertification, modifications) without an OASIS administrator identified for the organization and listed in OASIS.
- 12.3 When CB accreditation is withdrawn existing certificates shall remain visible in OASIS for six months with CB status indicated as 'CB Withdrawn' or until transfer to another CB, whichever is shorter.
- 12.4 The responsibility for the correctness of data in OASIS, regardless of who inputs the data, is depicted in Table 7.

Data Type	Responsibility
Organization	Organization
Audit and Certification	Certification Body (CB)
Auditor	Auditor

TABLE 7 – OASIS DATA RESPONSIBILITY

- 12.5 Data entry shall be made by designated administrators. These administrators can be part of the organization (i.e., supplier administrator) or be part of an external body as determined by the SMS.

### 13. REQUIREMENTS OF THE OTHER PARTY MANAGEMENT TEAM

#### 13.1 Procedure

- a. Any issues related to the implementation or use of this standard shall be referred to the IAQG OPMT. The OPMT can use published resolutions to clarify the 9104-series standards in accordance with IAQG Procedure 103.
- b. Any issues regarding this document that cannot be resolved by the IAQG OPMT shall be referred to the IAQG Council. The decision of the IAQG Council is final.

#### 13.2 Responsibilities of the Other Party Management Team

- a. Perform a review of the operation of each sector scheme at least once every two years to monitor that each sector has implemented their sector schemes, as required, and to confirm conformance with the 9104-series standards (i.e., 9104/1, 9104/2, 9104/3).

NOTE: A review of the sector scheme usually takes place concurrent with IAQG and OPMT meetings. The host sector's SMS is normally audited by the visiting sector's SMS OPMT representatives.

- b. Provide a mechanism for a periodic review of the 'lessons learned' by each of the sectors.
- c. Ensure that the OASIS database operates effectively and is accessible to the IAQG members and the aviation, space, and defense supplier community.
- d. Provide a summary report to the full IAQG on the periodic reviews of each of the sector's schemes.
- e. Evaluate the results of IAF Peer Reviews of the ABs and participate in those reviews, as necessary.
- f. Monitor feedback from IAQG members, OASIS users, organizations, and related entities (e.g., ABs, CBs).
- g. Review the management of the OASIS database.
- h. Conduct periodic reviews and recommend initiatives that continue to develop and improve the effectiveness of the ICOP scheme.

### 13.3 Composition of the Other Party Management Team

- a. Each IAQG sector appoints three representatives, which are part of their SMS, with voting rights to meet at least annually with representatives from the other sectors to accomplish the objectives listed above. These meetings can be scheduled in conjunction with a regularly scheduled IAQG meeting. Each sector shall also appoint alternate members to ensure full representation at all meetings/votes.
- b. The meetings will be open for general topics and closed for oversight activities or other industry specific topics. Representatives from the IAF, ABs, CBs, AABs, and regulatory authorities can participate in closed meetings, as observers, by obtaining approval of the IAQG OPMT Oversight Chairperson.

### 13.4 International Aerospace Quality Group Oversight Activities

IAQG OPMT shall perform the reviews required by this document (see section 9) and 9104/2.

## 14. ONLINE AEROSPACE SUPPLIER INFORMATION SYSTEM DATABASE FEEDBACK PROCESS

OASIS users can send feedback to issuing CBs with any questions or suggestions they have regarding the certificates, audits, and information entered for any organization. These questions or suggestions may be related to data entered or missing from OASIS, to CB findings and conclusions, or to organization quality management system performance (e.g., wrong dates, requests to pay attention to specific issues during the next audits).

The OASIS Feedback Process is depicted in Figure 1 and the following requirements apply:

- CBs shall nominate the contact person(s) who will receive feedback requests.
- The associated organization receives a copy of all feedback requests, as determined by the originator.
- Depending on the nature of the request, the initiator can ask for a response to be provided. CBs are required to investigate the feedback received and to respond, if requested.
- After a satisfactory response/reaction by the CB, the user who initiated the request shall close the feedback request. Unsatisfactory responses shall be resolved using the escalation process.
- OASIS logs all requests and keeps track of response times; this information shall be made available for ABs and industry oversight personnel. As part of the oversight, CBs may be measured on their responsiveness to feedback questions or suggestions (see 9104/2).

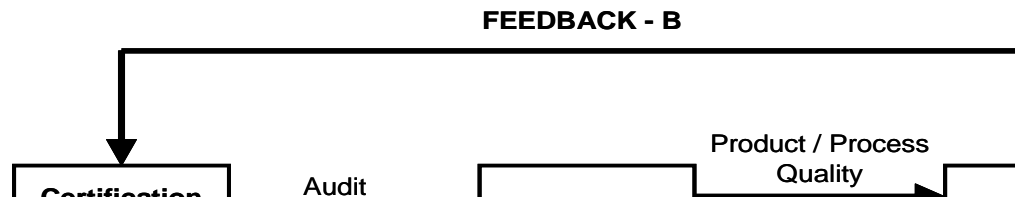


FIGURE 1 – THE OASIS FEEDBACK PROCESS

NOTE: The OASIS 'Help/Guidance' contains a detailed procedure on how to initiate and process feedback requests.

## 15. SECTOR MANAGEMENT STRUCTURE

### 15.1 Organization of the Sector Management Structure

The ICOP scheme shall be supported by three global SMSs, as depicted in Figure 2. Each SMS shall ensure conformity to the requirements of this document in their respective sectors.

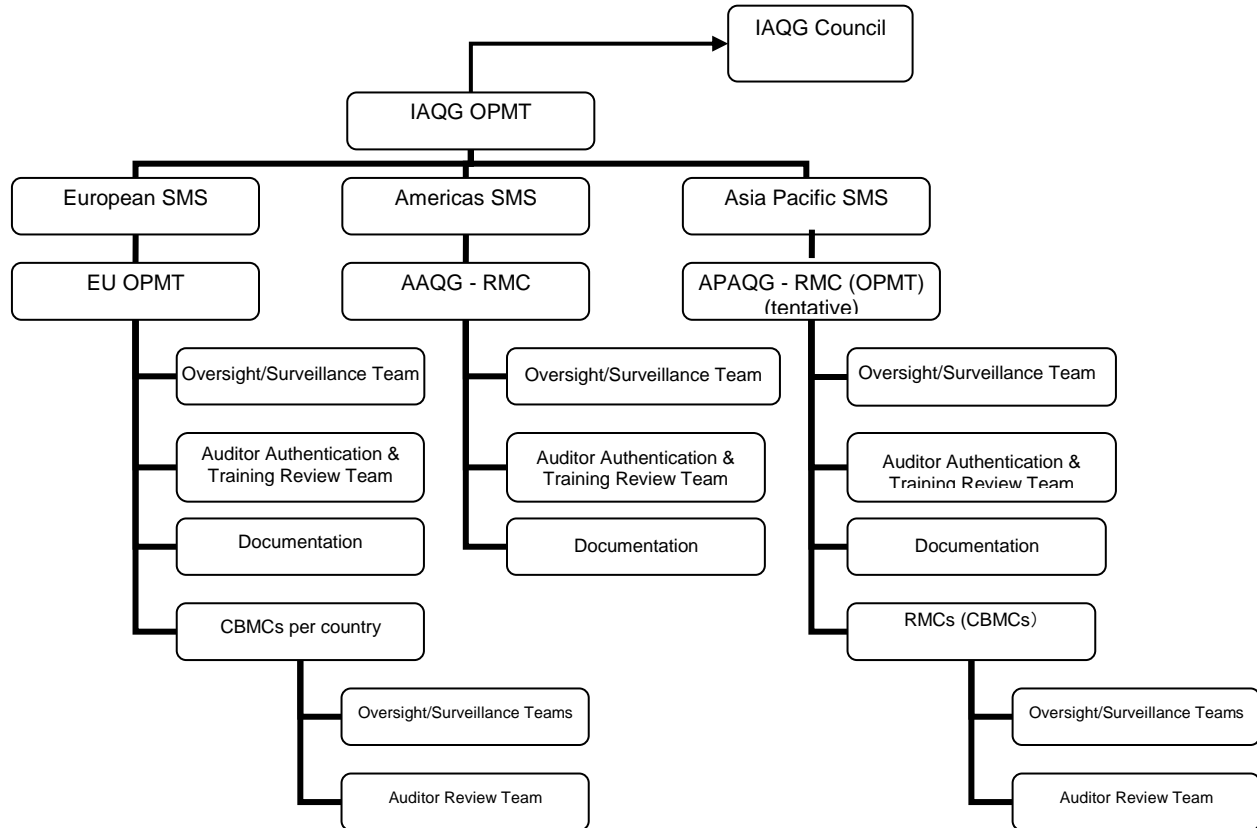


FIGURE 2 – SECTOR MANAGEMENT STRUCTURE DIAGRAM

### 15.2 Composition of the Sector Management Structure

The composition of each SMS is based on the local situation of each sector and can be comprised of representatives from the AB, CB, AAB, TPAB, CBMC organizations, regulatory authorities, and sector member companies (i.e., AAQG, APAQG, EAQG). Only IAQG or sector member company representatives have voting rights.

### 15.3 Authority of the Sector Management Structure

- a. The SMS has the authority for suspending a national scheme (i.e., AB), in case of lack of evidence on conformance to or serious breach of the requirements of this document. The suspended AB shall submit to the SMS acceptable corrective action to address the breach within 90 days of notification. The SMS will not recognize the accreditation of any new CBs during the suspension period. Failure to meet the 90 day timeframe will result in withdrawal of the AB for a minimum of 12 months.
- b. Accredited CBs will not be immediately impacted by an AB suspension. If AB withdrawal occurs, the CBs will have six months to seek accreditation by another SMS approved AB or they will have their SMS recognition withdrawn.

- c. Accredited aerospace certificates will not be immediately affected by an AB suspension. If a CB's SMS recognition is withdrawn due to AB withdrawal, certificates will be eligible for transfer.
- d. The actions and resolutions associated to an AB suspension will be established by the involved SMS and communicated through the IAQG OPMT to the other sectors.

15.4 Sector Management Structure Representation to the International Aerospace Quality Group Other Party Management Team

The SMS shall appoint three representatives and alternates (with voting rights) to participate on the IAQG OPMT. Should the designated members be unable to support an IAQG OMPT activity, then they must identify and notify the OPMT of their alternate, prior to the activity.

**16. CROSS FRONTIER POLICY FOR 9104/2 OVERSIGHT ACTIVITY**

- 16.1 ABs, SMSs, or CBMCs conducting oversight can conduct assessments on CBs operating in countries other than the country in which the AB accreditation or central office of the CB is based.
- 16.2 Provided that international and regional requirements are fulfilled, ABs can operate cross frontier (i.e., in a country other than the home country of the AB). The AB can only subcontract assessment work to a local AB provided that the local AB is recognized by the IAQG.
- 16.3 The AB shall make the decision to subcontract the assessment, based on the principles set out in the IAF requirements (see IAF GD 3) in relation to cross frontier assessments. Where an assessment is subcontracted to a local AB by the accrediting AB, then the principles set out by IAF shall form the basis for arranging the subcontracted assessment. The AB shall provide information on the subcontracted assessment to the SMS, CBMC, OP assessor, and the CB concerned to allow coordination by all parties.
- 16.4 The accrediting AB shall retain responsibility for the assessment and review the assessment reports and findings provided by the local AB. Where necessary, the AB shall address and resolve any findings that constitute a nonconformity to the 9104-series standards with the CB, as if they had conducted the assessment.
- 16.5 Where an SMS makes a decision to subcontract an OP assessment, the SMS/CBMC shall contact the SMS/CBMC of the local country or sector to provide a qualified OP assessor to attend the assessment. The subcontracting SMS/CBMC shall consider the principles of the IAF in making its arrangements to subcontract the OP assessment. The subcontracting SMS/CBMC shall provide a summary of the requirements for the oversight assessment to the local OP assessor. The SMS/CBMC shall provide information on the subcontracted assessment to the AB and the applicable CB to allow coordination by all parties.
- 16.6 The local OP assessor shall prepare a report of the assessment findings, in accordance with the summary provided and the requirements defined in 9104/2; this report shall be provided to the subcontracting SMS/CBMC.
- 16.7 The subcontracting SMS/CBMC shall retain responsibility for the oversight assessment and shall review the oversight report and findings produced by the local OP assessor. Where necessary, the subcontracting SMS/CBMC shall address and resolve any findings that constitute a nonconformity to the 9104-series standards with the AB or CB, as if they had conducted the assessment.
- 16.8 If the SMS/CBMC is unable to arrange for an OP assessor outside of its region and is required to complete oversight outside of SMS/CBMC region due to a CB operating outside of the SMS/CBMC's region, the SMS/CBMC can levy a fee on the CB for the additional cost of oversight incurred.

## 17. RECORDS

17.1 The responsible party that conducts activities, in accordance with this standard, shall maintain records for a minimum period of six years (e.g., IAQG OPMT shall maintain SMS oversight records), unless otherwise specified.

17.2 The IAQG OPMT and the SMS shall define and list the records that shall be retained.

NOTE: All application forms, assessment check sheets, and reports required by this standard, 9104/2, and 9104/3 shall be considered a record.

17.3 The SMS shall have access to records regarding approval of CBs holding AQMS standard accreditation for the purposes of establishing conformance with this document. CB representatives of the SMS shall not be provided with access to records of their competitors.

17.4 The IAQG OPMT shall have access to all records and data relating to this scheme (e.g., IAF peer review reports, accreditation reports of CBs, organization audit reports) in all sectors for the purpose of confirming conformance with this document across all sectors. In addition, the OPMT and each SMS shall have access to all data in OASIS for the purpose of conducting oversight of the scheme. Industry representatives to the OPMT or SMS shall not be provided with access to records of their competitors.

## 18. REQUIREMENTS FOR CERTIFIED ORGANIZATIONS

18.1 AQMS certified organizations shall allow CBs to provide tier 1 (information on the issued AQMS standard certificate – public domain) and tier 2 (information and results of audits, assessments, nonconformances, corrective action, scoring, suspensions, etc. – private domain) data to the OASIS database. Organizations shall provide access to the tier 2 data in OASIS to their aviation, space, and defense customers and authorities, upon request, unless justification can be provided (e.g., competition confidentiality, conflict of interest).

18.2 If AQMS certified organizations lose their AQMS standard certification, they shall provide immediate notification to their aviation, space, and defense customers.

18.3 AQMS certified organizations shall provide 'right of access' to their facilities, people, and processes for review by customers and regulatory authorities.

## 19. FEES AND FINANCIALS

19.1 The IAQG OPMT can recommend fees for registration of audit data in the OASIS database. The IAQG Council shall be the approval authority for all recommendations for fees generated by the ICOP processes.

19.2 The IAQG OPMT Chairperson shall prepare an annual budget for the implementation of the ICOP scheme. This budget shall be presented to the IAQG Treasurer for review and approval. This budget shall include estimates for contract labor, meeting/workshop costs, sector ICOP projects, and OASIS sustainment, maintenance, and improvements.

19.3 Each SMS can recommend fees to facilitate the ICOP scheme. These fees shall be approved by the sector.

## 20. NOTES

The change bar (|) located in the left margin is for the convenience of the user in locating areas where technical revisions, not editorial changes, have been made to the previous issue of this document. An (R) symbol to the left of the document title indicates a complete revision of the document.

**APPENDIX A – INFORMATION TO BE PROVIDED INTO THE OASIS DATABASE**

## 1. Data Input:

- Certificate Identification (ID), including issue/re-issue and expiry date.
- Scope of certification.
- Type of audit performed (i.e., initial, surveillance, recertification, special).
- Audit dates and number of auditor days (i.e., number of auditors and number of days spent by the audit team); for example, 3 auditors spend 4 days = 12 auditor days.
- The number of organization employees per site listed on the certificate.
- Name of lead-auditor.
- Name(s) of other Aerospace Experience Auditor(s) (AEAs) and Aerospace Auditors (AAs) that participated on the audit.
- The applicable AQMS standard (e.g., AS9100C) against which the audit was performed.  
NOTE: For each standard (i.e., 9110, 9110, 9120) a separate entry is required.
- Number of major/minor nonconformities per clause for the applicable AQMS standard.
- Audit summary.
- Organization identified exclusions (clauses of the standard).
- Process Effectiveness Assessment Report (PEAR) data:
  - a. PEAR ID Number.
  - b. Effectiveness Level.
  - c. Process Name.
  - d. Standard(s) Clause(s).
  - e. Site.
  - f. Auditor(s) Name.
  - g. Issue Date.
  - h. Audit Report Reference.

## 2. Upload applicable audit records (electronic file in pdf format); see 9101:

- Stage 1 Audit Report.
- Stage 2 Audit Report.
- Surveillance Audit Report.
- Recertification Audit Report.
- Special Audit Report.
- Nonconformity Report(s) (NCR).
- Product Effectiveness Assessment Report(s) (PEAR).
- Process Based Audit Completeness Record.

NOTE 1: The Objective Evidence Record (OER) should not be uploaded, but remains part of the audit file maintain at the Certification Body (CB) office.

NOTE 2: Training/guidance on data entry will be provided by the Sector Management Structure (SMS) upon accreditation of a CB.

NOTE 3: The data related to the certified organization [e.g., name, full address, contact person(s)] will be maintained in OASIS by the certified organization.



	<b>AVIATION, SPACE and DEFENSE STANDARD</b>	9101: 2009
		<b>Issued</b>  <b>Revised</b>

**Quality Management Systems**  
**Audit Requirements for Aviation, Space, and Defense Organizations**  
**DRAFT**  
**17 August 2009**

**FOREWORD**

To assure customer satisfaction, aviation, space, and defense organizations must produce and continually improve safe, reliable products that meet or exceed customer and applicable statutory and regulatory requirements. The globalization of the industry and the resulting diversity of regional and national requirements and expectations have complicated this objective. Organizations have the challenge of purchasing products from suppliers throughout the world and at all levels of the supply chain. Suppliers have the challenge of delivering products to multiple customers having varying quality requirements and expectations.

Industry has established the International Aerospace Quality Group (IAQG), with representatives from companies in the Americas, Asia/Pacific, and Europe, to implement initiatives that make significant improvements in quality and reductions in cost throughout the value stream. This standard has been prepared by the IAQG.

This document standardizes the requirements for conducting and reporting of quality management system audits. It provides requirements for an audit and reporting process based on:

- the process and continual improvement approach defined in 9100-series standards;
- the specific aviation, space, and defense additions in 9100-series standards;
- the use of common audit tools; and
- the uniform, transparent, and standardized reporting of audit results.

It can be used by aviation, space, and defense organizations at all levels throughout the global supply chain.

Information marked "NOTE" is for guidance in understanding or clarifying the associated requirement.

**REVISION SUMMARY/RATIONALE**

This standard has been completely rewritten to incorporate the 2009 changes to IAQG 9100-series standard quality management system requirements, the requirements for accredited Certification Bodies (CBs) introduced by International Organization for Standardization (ISO) / International Electrotechnical Commission (IEC) 17021, and inputs received from industry stakeholders associated to process based auditing methods and the evaluation of process effectiveness. It replaces the existing versions of 9101, 9111, and 9121 (e.g., AS9101C, AS9111, AS9121, EN9101:2006, EN9111:2005, EN9121:2005, SJAC 9101C).

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## INTRODUCTION

### 0.1 GENERAL

Auditing is a basic tool to assess effective implementation of and conformity to quality management system requirements. In addition to the determination of conformity, this standard focuses on the evaluation of effectiveness of the quality management system and its associated processes.

An organization is not only required to be in conformity with quality management system requirements, but to be effective in meeting customer expectations and delivering products that meet those expectations. In other words, an organization must not only meet the requirements of the quality management system standard, but at the same time deliver products that satisfy customer expectations.

This standard takes into account the new requirements presented in the 2009 revisions of the 9100-series standards [e.g., critical items, special requirements, On-time Delivery (OTD) performance, risk management, project management].

### 0.2 AUDITING APPROACH

This standard supports the engagement and evaluation of an organization's quality management system process approach, as required by the 9100-series standards. When evaluating an organization's quality management system, there are basic questions that should be asked of every process, for example:

- Is the process identified and appropriately defined?
- Are responsibilities assigned?
- Are the procedures implemented and maintained?
- Is the process effective in achieving the desired results?

The collective answers to these and other associated questions will contribute to the evaluation results.

Additionally, product quality (as delivered), customer satisfaction, and quality management system effectiveness can be considered as interrelated. This relationship should be reflected in the audit process and associated results.

### 0.3 Audit Records and Reports

This standard defines the audit records and reports to be generated and maintained. They are critical in providing objective evidence on conformity of the quality management system (including process effectiveness), and reporting the audit results. They can be used to inform the organization and its customers in a standard format/structure.

Records and reports to be generated are identified within this standard as appendices and shall be used to fulfill the reporting requirements.

NOTE: Electronic templates of these documents are available.

## REQUIREMENTS

### 1. SCOPE

#### 1.1 GENERAL

This standard defines requirements for the preparation and execution of the audit process. Additionally, it defines the content and composition for the audit reporting of conformity and process effectiveness to the 9100-series standards, the organization's quality management system documentation, and customer/regulatory requirements.

The requirements in this standard are additions or represent changes to the requirements and guidelines in the standards for conformity assessment, auditing, and certification as published by ISO/IEC (i.e., ISO/IEC 17000, ISO 19011, ISO/IEC 17021). When there is conflict between the standards, the requirements of the 9101 standard shall take precedence.

NOTE 1: In this standard, the term "9100-series standards" comprises the following quality management system standards: 9100, 9110, and 9120; developed by the IAQG and published by various national standards bodies.

NOTE 2: In addition to this standard, IAQG publishes recommended practices that can be used by audit teams when executing the audit process.

#### 1.2 APPLICATION

This standard shall be used for audits of 9100-series standards by CBs for certification of organizations, under the auspices of the aviation, space, and defense industry certification scheme [also known as Industry Controlled Other Party (ICOP) scheme]. The ICOP scheme requirements are defined in the 9104-series standards.

NOTE 1: Conflicts between 9104-series standards and this standard will be resolved through the processes defined in IAQG Operating Procedure 103, "Maintenance of Standards Issued by the IAQG".

NOTE 2: Relevant parts of this standard (e.g., clauses 4.2.1, 4.2.2, 4.2.3, and 4.2.4) can be used by an organization in support of internal audits (1<sup>st</sup> party) and external audits at suppliers (2<sup>nd</sup> party). This includes the audit methodology, guidance material, and document formats [e.g., audit reports, Nonconformity Reports (NCRs), other documents described in the appendices]. In such case, the words "Certification Body" or "CB" should be read as "auditor" or "auditing organization", as appropriate.

## 2. NORMATIVE REFERENCES

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- 9100\* Quality Management Systems – Requirements for Aviation, Space and Defense Organizations
- 9110\* Quality Management Systems – Requirements for Aviation Maintenance Organizations
- 9120\* Quality Management Systems – Requirements for Aviation, Space and Defense Distributors
- 9104\* Requirements for Aerospace Quality Management System Certification / Registrations Programs
- 9104/2\* Requirements for Oversight of Aerospace Quality Management System Registration / Certification Programs
- 9104/3\* Requirements for Aerospace Auditor Competency and Training Courses
- IAF MD 2:2007 IAF Mandatory Document for the Transfer of Accredited Certification of Management Systems
- ISO 9000: 2005 Quality management systems – Fundamentals and vocabulary
- ISO/IEC 17000: 2004 Conformity assessment – Vocabulary and general principles

- ISO/IEC 17021: 2006 Conformity assessment – Requirements for bodies providing audit and certification of management systems
- ISO 19011: 2002 Guidelines for quality and/or environmental management systems auditing
- IAQG Procedure 103 Maintenance of Standards Issued by the IAQG

\* As developed under the auspices of the IAQG and published by various standards bodies (e.g., ASD-STAN, SAE, CEN, JSA).

### 3. TERMS AND DEFINITIONS

For the purpose of this standard, the terms and definitions provided in ISO 9000, ISO/IEC 17000, 9100-series standards, 9104-series standards (i.e., 9104, 9104/2, 9104/3), and the following apply.

#### 3.1 CONTAINMENT

Action to control and mitigate the impact of a nonconformity and protect the customer's operation (stop the problem from getting worse); includes correction, immediate corrective action, immediate communication, and verification that the nonconforming situation does not further degrade.

#### 3.2 MAJOR NONCONFORMITY

A non-fulfillment of a requirement which is likely to result in the failure of the quality management system or reduce its ability to assure controlled processes or compliant products; it can be one or more of the following situations:

- a nonconformity where the effect is judged to be detrimental to the integrity of the product or service;
- the absence of or total breakdown of a system to meet a 9100-series standard requirement, an organization procedure, or customer quality management system requirement;
- any nonconformity that would result in the probable shipment of nonconforming product; and
- a condition that could result in the failure or reduce the usability of the product or service and its intended purpose.

#### 3.3 MINOR NONCONFORMITY

A non-fulfillment of a requirement which is not likely to result in the failure of the quality management system or reduce its ability to assure controlled processes or compliant products; it can be either one of the following situations:

- a single system failure or lapse in conformance with a 9100-series standard or customer quality management system requirement; or
- a single system failure or lapse in conformance with a procedure associated to the organization's quality management system.

NOTE: A number of minor nonconformities against one requirement (e.g., similar nonconformities associated to different sites or different departments/functions/processes within a single site) can represent a total breakdown of the system and thus be considered a major nonconformity.

#### 3.4 NONCONFORMITY REPORT (NCR)

A document stating results and providing objective evidence of nonconformity against audit criteria, including the following information: containment, correction, root cause, corrective action implementation, and closure.

#### 3.5 OBJECTIVE EVIDENCE RECORD (OER)

A document recording objective evidence of the audit findings, including reference to the reviewed or observed procedures, records, products, processes, and associated NCRs and opportunities for improvement.

### 3.6 ONLINE AEROSPACE SUPPLIER INFORMATION SYSTEM (OASIS)

Web-based IAQG database containing information on participating IAQG member companies, National Aerospace Industry Associations (NAIAs), National Accreditation Bodies (NABs), accredited CBs, authenticated Aerospace Experience Auditors (AEAs), certified suppliers, certificates, and assessment results.

### 3.7 PROCESS EFFECTIVENESS ASSESSMENT REPORT (PEAR)

A document stating results and providing evidence of determination on the effectiveness of a process.

## 4. AUDITING AND REPORTING

Referenced ISO/IEC 17021 and ISO 19011 clauses shall be invoked as requirements, including the associated 'practical help' text in applicable ISO 19011 clauses.

### 4.1 GENERAL

#### Audit Process

The audit process and associated activities (see clause 4.1.1) shall be followed when auditing and certifying quality management systems in the aviation, space, and defense industry.

The audit process established to assess conformity, including the determination of effectiveness, of quality management systems to the 9100-series standards shall meet the requirements of ISO/IEC 17021 and the additional requirements defined by this standard.

The audit process requirements consist of three main parts:

- a) the phases of the audit process (see clause 4.1.1);
- b) information on the common activities (see clause 4.2) that shall be used to support the audit phases; and
- c) the specific requirements for each audit phase (see clause 4.3).

#### Audit Methodology

The audit can be conducted through the use of various auditing methods, to determine the quality management system conformity, including the determination of effectiveness. The methodologies defined in clause 4.1.2 are complementary to audit practices of ISO 19011 and can be employed to establish audit trails and facilitate information collection.

#### 4.1.1 Audit Process

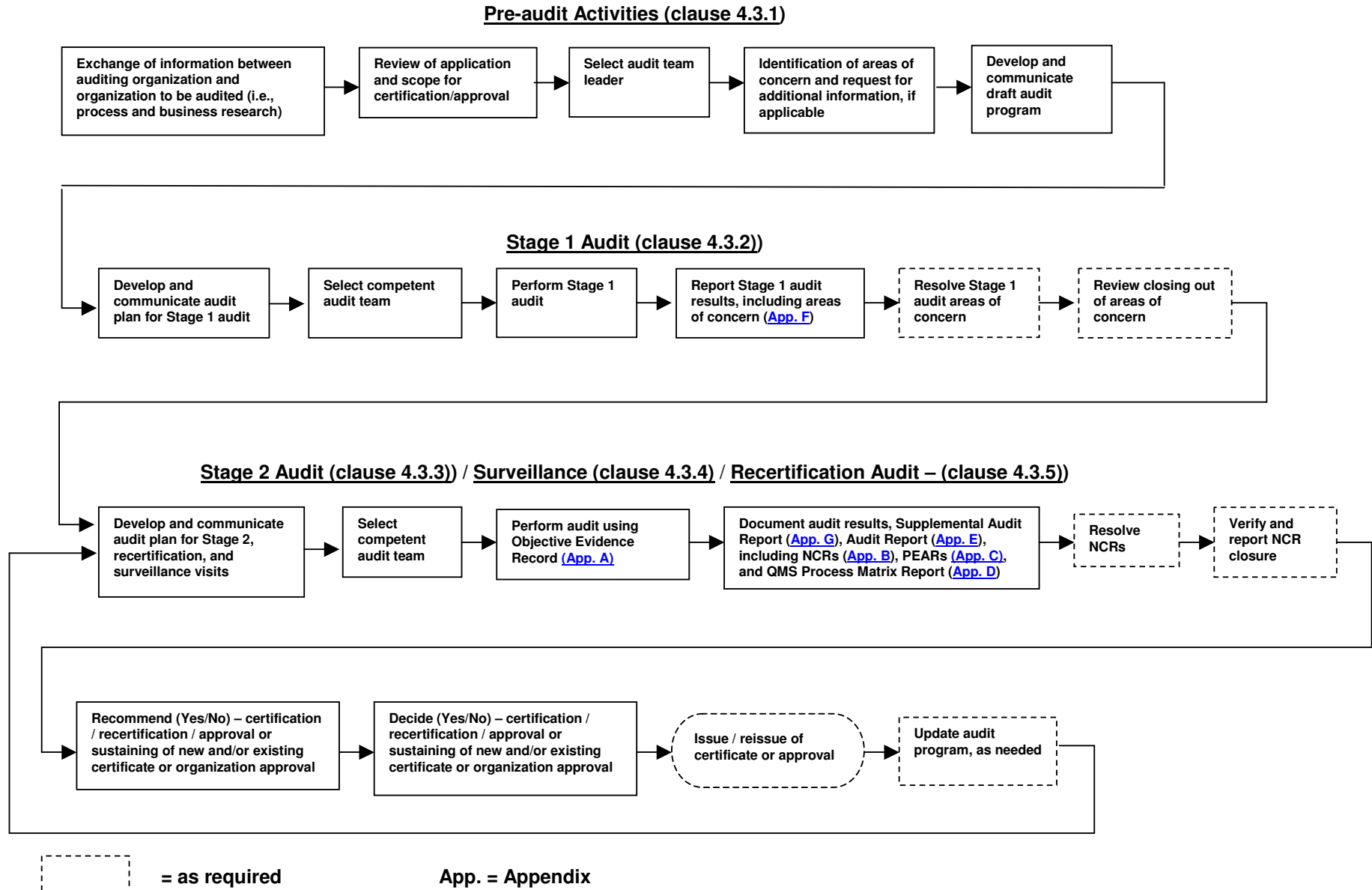
The audit process consists of the following phases (see Figure 1):

- Pre-audit activities (see clause 4.3.1);
- Stage 1 audit (see clause 4.3.2);
- Stage 2 audit (see clause 4.3.3);
- Surveillance audit (see clause 4.3.4); and
- Recertification audit (see clause 4.3.5).

Pre-audit activities, Stage 1, and Stage 2 are applicable for initial certification. Stage 1 audit can be utilized for recertification [see ISO/IEC 17021 clause 9.4].

NOTE 1: Although 'Special Audit' is not listed as a part of the audit program, it can be applicable after initial certification when directed by special request. The requirements for special audits are addressed in clause 4.3.6.

NOTE 2: Although certification is formally part of the audit process, the requirements for certification are defined by the 9104-series standards.



**FIGURE 1: OVERVIEW OF AUDIT PROCESS FLOW**

Common Activities

Audit planning, on-site auditing, and audit reporting are common activities linked with Stage 1, Stage 2, surveillance, and recertification audits. Nonconformity management is common for Stage 2, surveillance, and recertification audits.

The requirements for activities and/or common activities that apply to each phase of the audit program are referenced in Figure 2.

The Stage 1, Stage 2, surveillance, and recertification activities shall be described in the audit program established during the 'Pre-audit Activities' phase.

		← Audit Program →			
Audit Phase (4.3) Common Activity (4.2)	Pre-audit Activities (4.3.1)	Stage 1 (4.3.2)	Stage 2 (4.3.3)	Surveillance (4.3.4)	Recertification (4.3.5)
Audit Planning (4.2.1)	√	√	√	√	√
On-site Auditing (4.2.2)		√	√	√	√
Audit Reporting (4.2.3)		√	√	√	√
Nonconformity Management (4.2.4)			√	√	√

**FIGURE 2: RELATIONSHIPS BETWEEN AUDIT PHASES AND COMMON AUDIT ACTIVITIES**

**4.1.2 Audit Methodology**

The following approaches identify different audit methods that can be used, as appropriate, to conduct audits.

NOTE: The identified methods are not intended to be a complete listing, but represent a significant contribution for auditors to evaluate system conformity and effectiveness. Use of these methods will help transition from clause based auditing and put focus on the actual processes, their effectiveness, and their ability to meet the quality objectives.

**4.1.2.1 Customer Focus**

The audit team should assess whether customer satisfaction is adequately evaluated and appropriate actions are taken by the organization based on available performance information (e.g., nonconformity data, corrective action requests, results of satisfaction surveys, complaints regarding product quality, OTD, service provision, responsiveness to customer and internal requests) provided by the organization's customers (e.g., scorecards, report cards). In addition, organization related 'feedback requests' received through OASIS should be evaluated to confirm they have been addressed.

Customer feedback is a process and should be audited as a process; not audited as a clause of the standard. An evaluation should be performed in how this process is managed and its ability to provide meaningful information in order to assess the overall effectiveness of the quality management system.



#### **4.1.2.2 Organizational Leadership**

There should be an interview with top management to evaluate the:

- a) establishment and continued relevance of the organization's quality policy and objectives;
- b) establishment of performance measures aligned to quality objectives;
- c) quality management system development, implementation, and continual improvement;
- d) top management commitment;
- e) quality management system performance and effectiveness;
- f) performance to customer expectations (e.g., supplier rating, scorecard, audit results); and
- g) actions taken to address issues that are not meeting customer performance expectations.

#### **4.1.2.3 Quality Management System Performance and Effectiveness**

The audit of quality management system performance and effectiveness should include a review of the following:

- a) the processing and handling of customer complaints, customer feedback data (e.g., periodic performance reports received from customers), and other customer data (e.g., results of customer surveys);
- b) results and actions from internal and external audits of the quality management system, including their associated records;
- c) stakeholder feedback (e.g., feedback from regulatory authorities or other interested parties);
- d) the process and handling of process/product nonconformities, including review of associated corrective actions and evaluation of the effectiveness of actions taken;
- e) the process and handling of preventive actions, including evaluation of the effectiveness of actions taken;
- f) management review conduct, including review of associated records (e.g., process inputs/outputs, actions taken);
- g) internal performance monitoring, measurement, reporting, and reviews against stakeholder and internal performance objectives and targets, including the review of continual improvement activities and associated records;
- h) the organization's current performance against targets, including customer specific targets and associated records of applicable corrective actions taken where targets are not being met; and
- i) the status and effectiveness of the organization's process performance improvement activities and their outcomes related to product quality.

NOTE: Evaluation of the effectiveness of the quality management system should consider how well the system is deployed, as demonstrated by the measures defined by the organization to meet customer satisfaction and organization quality objectives.

#### **4.1.2.4 Process Management**

The audit team should conduct quality management system audits using a method that focuses on process performance and effectiveness; this approach shall ensure that priority is given to the following:

- a) reviewing the organization's processes, their sequence and interactions, and performance against requirements and defined measures, with focus on processes that directly impact the customer;

- b) reviewing the process based management techniques, including the examination of process controls (e.g., quality, takt time, cycle time, output effectiveness, control limits, process capability determination);
- c) reviewing the process objectives/targets, with focus on areas where objectives/targets have not been achieved and on issues that have the greatest impact on the customer(s);
- d) reviewing plans in place to ensure performance objectives/targets are met;
- e) reviewing applicable corrective action plans in place where objectives/targets are not met; and
- f) pursuing audit trails addressing customer concerns or requests for corrective actions, performance against objectives, and relevant process controls.

The audit team should pursue process based audit trails by following actual products, customer orders, and related documents (e.g., customer contracts, drawings, shop orders, inspection records) through the organization's product realization and other associated processes; verifying the interfaces between processes and the linked documentation requirements (see 9100-series standards clause 4.2); resource management (see 9100-series standards clause 6); and measurement, analysis, and improvement (see 9100-series standards clause 8).

#### **4.1.2.5 Process Performance and Effectiveness**

The audit team should audit processes to sufficient depth and detail to evaluate if the organization's processes are capable of meeting planned results and performance levels, including applicable customer specific targets.

NOTE 1: Key Performance Indicators (KPIs) are often used to identify organizational emphasis areas and acceptable performance levels.

The audit team should evaluate, as appropriate, that processes:

- a) are identified and appropriately defined;
- b) are sequenced and interactions are defined;
- c) have process input/outputs, activities, and resources defined;
- d) have responsibilities assigned and responsible functions identified;
- e) have relevant process controls defined;
- f) have the availability of resources and information required to operate and support associated activities, including appropriate training and competency of personnel;
- g) are monitored, measured, and analyzed against planned results (determination of process effectiveness);
- h) have actions implemented to achieve planned results and to promote continual improvement; and
- i) are effective in achieving the desired results (e.g., verify performance information available - percentage of nonconforming parts/products, percentage OTD).

NOTE 2: Planned results can be related to process outputs or to the associated activities.

#### **4.1.2.6 Continual Improvement**

The audit team should evaluate the organization's interrelated processes and activities for continual improvement of the quality management system, its processes, their conformity, and effectiveness in order to:

- ensure focus on issues that are important to the organization, their customers, and regulatory authorities; and
- determine the effectiveness of an organization's approach to continually improving process performance.

NOTE The organization should be able to demonstrate that they have a structured approach to achieve continual improvement of the quality management system and its processes.

The audit team should develop audit trails from actual situations (e.g., corrective action from an internal audit, response to a customer complaint, management review action item) associated to the following interconnected activities, as applicable:

- a) quality policy and objectives used to reflect the organization's commitment;
- b) identified improvement actions using various inputs, such as:
  - results of internal and external audits;
  - customer satisfaction data, including product quality, OTD performance, and complaints;
  - process performance;
  - aggregate information on corrective and preventive actions;
  - problem resolutions and lessons learned; and
  - benchmarking and sharing of best practices.
- c) management review used to evaluate the status of improvement action;
- d) availability and management of resources;
- e) continual improvement implementation plan(s);
- f) monitoring and measurement of continual improvement activities, including processes for:
  - monitoring and measurement of continual improvement actions and results;
  - evaluating effectiveness of actions taken and associated results; and
  - initiating modified/additional actions (see b and c above), if results are not satisfactory or effective.

## **4.2 COMMON AUDIT ACTIVITIES**

### **4.2.1 Audit Planning**

[ISO/IEC 17021 clauses 9.1.2 and 9.1.3; ISO 19011 clause 6.4.1]

The audit team leader shall be appointed before the audit; other audit team members shall be identified after the Stage 1 audit.

The audit planning should take into account:

- a) the scope and complexity of the organization's quality management system;
- b) the processes of the organization, including their sequence and interactions;
- c) the criticality of products and processes;
- d) product related safety issues (e.g., airworthiness issues, reporting to customer and/or authorities);
- e) results of internal audits;
- f) previous audit findings;
- g) the KPIs and trends for quality and OTD;
- h) previous management review results;

- i) customer satisfaction and complaints log, including feedback requests received by the CB (e.g., items identified through OASIS feedback process);
- j) customer specific, statutory, and regulatory quality management system requirements;
- k) performance data available from the customers;
- l) changes to organization (e.g., structure; facilities; business strategy; processes; technologies; a review of requirements from new aviation, space, and defense customers); and
- m) the audit team member required background/experience and desired competencies.

The audit team leader shall use organization's customer feedback requests, including those received through OASIS, to assist with audit planning for surveillance and recertification audits. The audit activities shall be prioritized based upon performance data for business risks that can impact the customer (i.e., customer concerns, customer special statuses) and on low performing processes.

As an input into the audit planning process, the audit team leader shall obtain information from the organization regarding their customers on the proportion of aviation, space, and defense business each customer represents, based on their approximate percentage of business. The audit team leader shall ensure that the amount of audit time planned on auditing any one customer's specific quality management system requirements is consistent (approximately) with the proportion of aviation, space, and defense business each customer represents (e.g., customer X may only have 20% of the business so do not spend 80% of the time verifying customer X's specific quality management system requirements).

NOTE: The need to use translators can impact the audit plan/planning and defined audit duration.

## **4.2.2 On-site Audits**

[ISO/IEC 17021 clause 9.1.9]

### **4.2.2.1 General**

Each on-site audit, except for nonconformity follow-up (see clause 4.2.4) and special audits (see clause 4.3.6) shall include the following, as applicable:

- a) a review of the changes to the quality management system, since the last audit;
- b) a review of requirements from new aviation, space, and defense customer, since the last audit;
- c) a review of customer satisfaction information and requested corrective actions and associated responses;
- d) an interview with top management (see clause 4.1.2.2);
- e) an audit of the quality management system performance and effectiveness (see clause 4.1.2.3);
- f) an audit of the organization's processes (their performance and effectiveness), as identified in the audit plan (see clause 4.1.2.5);
- g) an audit of the continual improvement of the quality management system (see clause 4.1.2.6);
- h) an audit of special processes, as identified in the audit plan (see clause 4.2.2.5);
- i) an audit of follow-up actions from previous audits.

During the audit, the relevant audit methods, as described in clause 4.1.2, shall be considered.

NOTE: If there is more than one surveillance audit during a year (e.g., every six months), the activities and items mentioned above can be spread over these audits.

#### 4.2.2.2 Opening Meeting

[ISO 19011 clause 6.5.1]

The opening meeting shall be conducted by the audit team leader. Attendance to the opening meeting shall be recorded. In addition to the criteria mentioned in ISO 19011, the following items shall be addressed, as applicable:

- a) introduce the participants, purpose, and roles of Accreditation Body (AB), Other Party (OP) assessors, or National Aviation Authorities (NAAs), if the certification audit is subject to a witness audit activity;
- b) confirmation of the status of findings from the previous review or audit; and
- c) reconfirmation of any access restrictions for security reasons.

#### 4.2.2.3 Site Tour

The audit team leader can decide to conduct a site tour to address any changes in scope or facilities since the last visit, or to familiarize audit team members with the organizations' activities.

#### 4.2.2.4 Audit Conduct

[ISO 19011 clause 6.5.2]

The audit should be conducted through the use of various auditing methods (see clause 4.1.2) and can pursue relevant audit trails to determine the quality management system conformity and effectiveness, as defined by the audit plan.

Objective evidence on audit findings shall be recorded in accordance with clause 4.2.2.6.

#### 4.2.2.5 Special Processes

If an organization operates special processes (see 9100/9110 clause 7.5.2), the audit team shall evaluate process validation, as well as, the monitoring, measuring, and control of these processes.

NOTE 1: When an organization declares that special processes are excluded from the scope of certification, the audit team should evaluate the justification of this exclusion during Stage 1 of the initial audit.

- a) Verification of Validation of Special Processes

The process records shall be reviewed for each audited special process, including a comparison between actual/planned results and the established arrangements (see 9100 clause 7.5.2).

- b) Monitoring, Measurement, and Control of Special Processes

The audit team shall identify process requirements, including customer requirements, for special processes during the Stage 1 audit and select a sample of the characteristics for each process. For these characteristics, the audit team shall audit the monitoring and measuring equipment used (e.g., calibration, accuracy) and the method for recording the results. If required, the traceability between the process (e.g., batch or load charge identification) and the resulting products shall be verified.

For outsourced special processes, the audit team shall verify that the organization's supplier control process addresses these items accordingly. In addition, the audit team shall review the use of customer-designated sources, as required.

NOTE2: Special processes are managed by using personnel qualified, as required by organization and/or customer requirements, and by controlling physical or chemical process characteristics [e.g., temperature, time (process duration), pressure, chemical composition of product or process treatment material (surface treatment solution)].

NOTE 3: If an audit(s) has been performed by a customer or by a specialized independent 3<sup>rd</sup> party, the audit team can take the audit by these organizations into account.

#### 4.2.2.6 Identifying and Recording of Audit Findings

[ISO/IEC 17021 clauses 9.2, 9.3, and 9.4; ISO 19011 clause 6.5.5]

CBs shall record detailed objective evidence (e.g., reviewed procedures, shop orders, training records, products, verification records). This shall be on a standardized form, that is an OER (see Appendix A), or on the CBs own defined document(s). In this case, the CB document shall meet the intent of the OER. The completed forms shall be included in the audit records maintained by the CB.

NOTE 1: If clauses and sub-clauses are associated with processes that are addressed by PEARs, the objective evidence is only required to be documented on the PEAR. In such case, the PEAR number should be referenced in the OER.

In addition to recording conformity/nonconformity, the audit team may identify opportunities for improvement.

The NCR (see Appendix B) shall be used to record nonconformities; each NCR shall contain only one nonconformity. When nonconformities are identified, the audit team shall categorize the nonconformity as 'major' or 'minor', according to the definitions provided in this standard. The need for containment in accordance with the organization's corrective action process shall be reviewed by the audit team.

Recurrence of the same or similar nonconformity found during consecutive audits at a particular site/location shall be considered as a failure of the corrective action process (see 9100-series standards clause 8.5.2) and shall result in a major nonconformity being issued.

NOTE 2: If there is no evidence of non-fulfillment of a requirement, the auditor cannot issue a nonconformity. If the auditor found evidence of non-fulfillment of a requirement, the auditor determines the nonconformity classification (major/minor). Soft grading of nonconformities and/or identifying them as an observation, opportunity for improvement, or recommendation does not benefit the organization, its customers, or the CB. Furthermore, there is risk that the nonconformity be given a lower priority for correction and/or corrective action or that no action will be taken, and the conditions will expand and/or continue to exist.

The results of effectiveness shall be recorded on the PEAR (see Appendix C) for each audited product realization process. The level of effectiveness for each process shall be recorded on the PEAR (statement of effectiveness level). If the level of effectiveness has been classified as a '2' or a '1', this shall result in a nonconformity being issued against 9100-series standards clauses 4.1.c and f (see clause 4.2.4).

NOTE 3: At the discretion of the audit organization, other processes can be recorded on a PEAR.

#### 4.2.2.7 Preparing Audit Conclusions

[ISO/IEC 17021 clauses 9.2.4, 9.3, and 9.4; ISO 19011 clause 6.5.6]

Prior to the closing meeting, the audit team shall identify any changes that may be required to the audit program (e.g., scope, audit time or timing, surveillance frequency, audit team competence).

#### 4.2.2.8 Closing Meeting

[ISO 19011 clause 6.5.7]

The closing meeting shall include the following, as a minimum:

- a) an explanation to the organization that audit evidence collected during the audit was a sample and not considered to be all encompassing of the organization's quality management system;
- b) an explanation of the audit teams method for reporting audit findings, including any grading of nonconformities (i.e., major, minor);
- c) an explanation of the process used by the audit team for handling nonconformities and what consequences, if any, there are in relation to the organization's certification or approval status and, if required, nonconformity closure;
- d) the communication to the organization of required time frames for nonconformity correction and corrective action plans, as applicable;

- e) the communication of any audit team activities taking place after completion of the audit (e.g., follow-up on corrective action plans, submittal of audit report);
- f) the communication of the audit team's certification recommendation based upon the completed audit; and
- g) the communication to the organization of how any complaints or appeals pertaining to the audit are to be processed.

### 4.2.3 Audit Reporting

[ISO/IEC 17021 clause 9.1.10; ISO 19011 clause 6.6]

The QMS Process Matrix Report (see Appendix D) shall be completed by the audit team for each visited site to demonstrate which processes and quality management system clauses have been audited. The form can be pre-populated prior to on-site activity and easily modified/revised, as appropriate, during each visit. The completed matrix sheet shall be part of the audit record.

NOTE 1: This form has multiple applications, it can be used:

- after the Stage 1 audit, for preparation of the audit plan for the initial Stage 2 audit;
- after the certification/recertification audit, to prepare the audit plan for the certification cycle surveillance audits; or
- to assist in visibly presenting the cross-references between the standard requirements and the organization's processes.

Exclusions, as justified by the organization and accepted by the audit team, shall be documented in the audit report (see Appendices E and F). Use of "Not Evaluated" (N/E) shall not be used in an initial or recertification audit.

At the conclusion of the Stage 1 audit (see clause 4.3.2.4), the audit report defined in [Appendix F](#) shall be compiled and issued. At the conclusion of each certification, surveillance, and recertification audit, audit results shall be recorded and issued containing the information and using the standard templates as defined in Appendices B (if applicable), C, D, and E. In addition, the Supplemental Report (see Appendix G) shall be used to record results for individual sites if the audit report (see Appendix E) does not include audit details of the individual sites.

The content of the audit report, including findings, shall give a true and independent view of the conformity status and determination of effectiveness of the quality management system in order to give confidence to customers or potential customers; enabling them to draw appropriate conclusions in their supplier selection and surveillance processes. The audit summary shall reflect the seriousness of the nonconformities (i.e., number, criticality, impact).

NOTE 2: The audit data, including required audit documents/records, needs to be uploaded to OASIS within the time frame specified in 9104.

### 4.2.4 Nonconformity Management

[ISO/IEC 17021 clauses 9.1. thru 9.4; ISO 19011 clause 6.8]

After issuance of a nonconformity the CB shall:

- a) when the nature of the nonconformity needs immediate containment action, require the organization to determine and report (see [Appendix B](#)) the specific containment actions, including correction within 7 calendar days after the audit and reach agreement with the audit team leader within the next 14 calendar days;
- b) require the organization to analyze and report on the NCR (see [Appendix B](#)): the root cause and specific correction and corrective actions taken, or planned to be taken, to eliminate the detected nonconformities within a defined time;
- c) document details of evidence supporting the closure of nonconformities;
- d) report to the organization after verification of corrective actions is complete; and

- e) resolve any areas requiring further clarification with the organization. This activity shall be completed within 90 days from the end of the on-site audit.

The NCR (see Appendix B) shall be used to document verification and nonconformity closure.

Evaluation and closing of the corrective action plan and associated corrective actions relating to a nonconformity shall not be performed during the audit in which the nonconformity was issued.

NOTE: Any containment action and correction can be reviewed during the audit.

Verification activities shall be carried out as directed by the audit team leader. Verification shall be carried out on-site, if the verification of the corrective action cannot be carried out based on a review of the documentation and supporting objective evidence provided by the organization.

#### **4.2.5 Audit Records**

[ISO/IEC 17021 clauses 9.9]

All information pertaining to the audit (e.g., checklists, questionnaires, auditor notes, records of objective evidence) shall become part of the audit records.

### **4.3 AUDIT PHASE SPECIFIC REQUIREMENTS**

#### **4.3.1 Pre-audit Activities**

[ISO/IEC 17021 clauses 8.6, 9.1.1 thru 9.1.9, 9.2.1, and 9.2.2; ISO 19011 clause 6.2]

All activities to be included in the scope of certification shall be relevant to the scope of the applicable 9100-series standards for aviation, space, and defense customers [see guidance on applicability (e.g., 9100 clause 1.2)].

##### **4.3.1.1 General**

In addition to the information defined in ISO/IEC 17021 [see clause 9.2.1], the CB shall require the organization to provide the following:

- the revenue for aviation, space, and defense industry, as a proportion of the total revenue;
- the number of employees working for aviation, space, and defense and the total workforce; and
- identification of the major aviation, space, and defense customers.

##### **4.3.1.2 Requirements for the Certification Body**

Before scheduling the Stage 1 visit, the CB shall:

- appoint an audit team leader that has sufficient knowledge of the activities and the intended scope of certification to determine required auditor competencies and/or whether technical experts are needed;
- take into account any additional requirements/requests from the organization and/or the organization's customer(s), as long as they are not in conflict with the provisions of ISO/IEC 17021, to optimize the benefit of the certification audit program; and
- ensure that audit time is identified in accordance with ISO/IEC 17021 [see clause 9.1.4] and 9104.

NOTE: These items can have influence on the audit duration throughout the certification cycle.

Organizations can deny auditors access to proprietary or classified information, and/or areas due to the competitive sensitivity or national security regulations invoked in customer contracts. The CB shall require the organization to provide information if any activities, programs, specifications, and/or areas are not accessible because of restrictive or confidential nature. The scope of certification shall not include processes that were not audited to sufficient depth to verify an organization's conformity, including the determination of effectiveness.



However, they may be included if the processes can be proven to be similar to processes that were assessed and the same quality management system procedures and controls are invoked. In the audit report, exclusions for these programs, customers, and/or activities shall be stated with supporting justification provided.

#### **4.3.1.3 Requirements for the Audit Team Leader**

Before scheduling the Stage 1 audit, the audit team leader shall:

- determine if information received during this pre-audit activity phase is sufficient to proceed to the Stage 1 audit; and
- verify the audit duration for the Stage 1 audit.

#### **4.3.2 Stage 1 Audit**

[ISO/IEC 17021 clause 9.2.3.1]

##### **4.3.2.1 General**

Before the Stage 1 audit, the audit team leader shall be appointed and possible audit team members shall be identified. After the Stage 1 audit, the team composition for the Stage 2 audit shall be reviewed based on information received and observed during the Stage 1 audit; followed by the final appointment of the team members.

The Stage 1 audit shall:

- be performed by the audit team leader appointed for the initial audit; and
- include an on-site visit.

NOTE: For 9120, the Stage 1 audit can be conducted off-site, based on organization considerations (e.g., size, location, risk, previous audit team knowledge).

For organizations with more than one site that have a single quality management system, the Stage 1 audit shall also include an evaluation of the identified central function with the authority for administration, control, audit, review, and maintenance of the quality management system. Additionally, a relevant number of representative sites, including all sites with different technologies and dissimilar activities, shall be included. This will give the audit team sufficient information in order to identify the complexity, risk, and scale of the activities covered by the quality management system subject to certification; any differences between sites; and to what extent each site produce or provide substantially the same kind of products/services according to the same procedures and methods.

The Stage 1 audit shall include a tour of the site facilities. This will enable the audit team leader or audit team to gain a greater understanding of the organization's processes, equipment, areas, products, and state of readiness in preparation for the Stage 2 audit.

##### **4.3.2.2 Collection of Information**

During the Stage 1 audit the audit team shall collect sufficient information that allows the CB to:

- confirm the audit program;
- review the need for additional technical experts and/or auditors to compose a competent audit team;
- determine any additional audit activities, as needed, for the fulfillment of the requirements for initial certification; and
- schedule the Stage 2 audit activities.

The audit team leader shall require the organization to provide the necessary information and documentation for review, including the following:

- quality manual;
- description of processes showing their sequence and interactions, including the identification of any outsourced processes;  
NOTE 1: The processes can be depicted in various ways [e.g., process maps, turtle diagrams, SIPOC method (breakdown of supplier, inputs, process steps/tasks, outputs, customer), octopus].
- KPIs and performance trends for the previous 12 months;
- evidence that all requirements of the applicable 9100-series standards are addressed by the organization's documented procedures established for the quality management system (e.g., by referencing them in the quality manual or by using a cross reference);
- interactions with support functions on-site or remote locations/sites;
- evidence of internal audits of all processes/procedures, including all internal and external quality management system requirements;
- the latest management review results;
- list of all major (e.g., top five) aviation, space, and/or defense and any other customers requiring 9100-series standard compliance, including an indication of how much business each customer represents and their customer specific quality management system requirements, if applicable; and
- evidence of customer satisfaction and complaint summaries, including verification of customer reports, scorecards, and special status or equivalent.

NOTE 2: Examples of customer specific quality management system requirements are: product process verification, including First Article Inspection (FAI) requirements (e.g., 9102), quality records to be created and maintained by the organization, coordination of document changes, defined special requirements/critical items/key characteristics, approval of design changes by the customer, flow down of requirements to sub-tiers, customer notification of production process changes, traceability, handling of nonconformities, and applicability of other IAQG quality management system standards in contracts (e.g., 9115, 9131).

#### **4.3.2.3 Review of the Organization**

During the Stage 1 audit, the subjects listed in clause 4.3.2.2 plus the following items shall be addressed, as applicable:

- number of employees (i.e., full time, part time, contract, temporary) dedicated to aviation, space, and defense;
- number of shifts and shift patterns specific to production and/or maintenance;
- evaluation of multiple site eligibility for determination of audit time and sampling;
- identification of high risk associated with processes and products;
- risk management and associated tools [e.g., Failure Mode and Effect Analysis (FMEA)];
- identification of special processes performed or subcontracted;
- regulatory requirements and authority approvals/recognitions;
- additional requirements on configuration management;
- project/program management;
- continual improvement activities;
- OTD and quality performance metrics;
- identification of special requirements/critical items, including key characteristics;
- production process verification [i.e., production readiness, production planning verification, FAI requirements (e.g., 9102)], as invoked in contracts;

- prevention programs [e.g., Foreign Object Debris/Damage (FOD)];
- special work environments [e.g., Electrostatic Discharge Sensitive (ESDS), clean room];
- customer presence at organization [e.g., resident representatives, regular meetings, reason(s) for presence];
- customer satisfaction and complaints status, including customer reports and scorecards;
- any customer special quality management system/approved supplier list approval statuses (e.g., limited approvals, probation, suspension, withdrawal);
- customer restricted areas or proprietary information/confidentiality;
- exclusions from 9100-series standards (exclusions must be limited to clause 7) and supporting justification;
- export limitations/controls [e.g., International Traffic in Arms Regulations (ITAR), Export Administration Regulation (EAR)];
- customer delegated verifications and Materials Review Board (MRB) authority; and
- customer authorized direct ship/direct delivery.

NOTE: The audit team can begin recording objective evidence related to the quality manual, quality management system process documentation, and the applicable process and procedural conformity results to the requirements of the applicable 9100-series standards.

#### **4.3.2.4 Stage 1 Conclusions**

The audit team leader shall use the results of the above review and any additional information obtained from the site tour to:

- determine the quality management system implementation status;
- determine the organization's readiness for the Stage 2 audit;
- identify any areas of concern that would be classified as a nonconformity, if not resolved before the Stage 2 audit;
- develop a plan for the Stage 2 audit, that includes any additional quality management system requirements from the organization's aviation, space, and defense customers;
- verify the proposed scope of certification and its applicability to the IAQG scheme and, where necessary, communicate to the organization why the proposed scope should be modified;
- verify the information used for and recommend/revise, as needed, the audit day calculation;
- review the audit time for the Stage 2 audit and update the audit plan accordingly;
- adjust the composition of the audit team for the Stage 2 audit, including the addition of any technical experts or translators that are needed; and
- identify any changes required to the contract and communicate those revisions to the organization and CB.

The audit findings shall be recorded in the Stage 1 Audit Report (see Appendix F). A copy of the audit report shall be given to the organization after completion of the Stage 1 audit.

The CB shall review the status of the areas of concerns to determine preparedness for the Stage 2 audit.

#### **4.3.3 Stage 2 Audit**

[ISO/IEC 17021 CLAUSE 9.2.3.2]

Stage 1 and Stage 2 audits shall not be performed on the same day or on consecutive days (back to back).

During the on-site activities for the Stage 2 audit, all elements of the quality management system and all organization's processes that are needed for the quality management system shall be audited for conformity (see Appendix D), including determination of effectiveness. Detailed audit findings, including reference to the audited processes, process documentation, and associated records, shall be documented (see clause 4.2.2.6).

During the opening meeting, the audit team leader shall reconfirm with the organization the issues identified during the Stage 1 audit (see clause 4.3.2).

After the opening meeting, the audit team leader shall:

- a) decide on conducting a facility tour to review substantial changes in scope or facilities, since the last visit; and
- b) revise planning, as needed, due to organization changes since the Stage 1 audit (e.g., personnel changes, department/business unit reorganization, new customer complaint) or any objections from the organization that impact the audit.

All nonconformities shall be closed and verified by the audit team before a recommendation for certification can be made.

NOTE: Requirements for closure on nonconformities are contained in 9104.

#### **4.3.4 Surveillance**

[ISO/IEC 17021 clause 9.3]

All clauses of the applicable quality management system standard and all of the organization's processes that are part of the quality management system shall be audited during the surveillance audits within one certification cycle. The audit method(s) to be used (e.g., audits on specific problems, areas, products, or sub-processes) shall be based on the outcome of the audit team's review of quality management system performance data.

The audit plan for the surveillance audit shall take consideration of changes in the organization (see clause 4.2.1). The composition of the audit team shall be determined, based on the audit plan for the surveillance audit. Audit plans for surveillance shall be based on continuing operational control of process and on product performance indicators and trends for the previous 12 months (both for quality and OTD).

All findings shall be documented (see clause 4.2.2.6).

For surveillance audits, the audit team leader shall advise within the audit report (see Appendix E) whether the recorded nonconformities should be reason for suspension of the certificate. Failure by the organization to demonstrate effective corrective action to deal with repeat nonconformities, the lack of actual performance data, or lack of operational control shall warrant suspension of the certificate.

NOTE 1: If there is more than one surveillance audit during a year (e.g., every six months), the activities and items mentioned under clause 4.2.2.1 can be spread over these audits.

NOTE 2: Requirements for closure of nonconformities are contained in 9104.

#### **4.3.5 Recertification**

[ISO/IEC 17021 clause 9.4]

The recertification audit should be planned a minimum of three months before the expiry date of the current certificate. The 'scope of certification' shall be verified prior to each recertification audit. Any change of customer approval status shall be reviewed by the audit team to determine the impact on the certification status. During the recertification audit, all processes and quality management system elements shall be audited.

The organization's quality manual and quality management system process documentation shall be reviewed for changes. Detailed results, including reference to the audited processes, process documentation, and records, shall be documented.

All nonconformities shall be closed and verified by the audit team before a recommendation for recertification can be made.

NOTE 1: Requirements for closure of nonconformities are contained in 9104.

NOTE 2: Appointment of a new audit team could be a justification for a full or partial Stage 1 audit, including an on-site visit by the audit team leader.

#### 4.3.6 Special Audits

[ISO/IEC 17021 clause 9.5]

Although technically not a part of initial certification, special audits can be performed anytime during the certification cycle in response to one of the following situations:

- a) in response to a customer or other interested party request, when a serious issue (supported by objective evidence) has been identified;

NOTE: In this case, the requester shall be notified in advance of the audit dates and made aware of the final audit results.

- b) in response to an organization's request to change their scope of certification (commonly known as extensions to scope) or revise the listing of certified sites; or

- c) when transferring certification from one CB to another.

NOTE: In this case, the pre-transfer review of the existing certification (see IAF MD 2) shall include an audit of the prospective organization site(s) by an AEA. Items listed in clause 4.2.1 shall be evaluated, including a review of previous certification audits performed by their prior CB (see requirements for transfer of certifications defined in 9104).

These audits shall be coordinated with the organization prior to the visit. The organization shall be given information about the specific reason and subject of the visit.

An audit plan shall be completed and submitted to the organization prior to arrival. The results for special audits shall be documented on the applicable appendices (e.g., Appendices A, B, C, and E).

**LIST OF APPENDICES**

- APPENDIX A OBJECTIVE EVIDENCE RECORD (OER)
- APPENDIX B NONCONFORMITY REPORT (NCR)\*
- APPENDIX C PROCESS EFFECTIVENESS ASSESSMENT REPORT (PEAR)\*
- APPENDIX D QMS PROCESS MATRIX REPORT\*
- APPENDIX E AUDIT REPORT\* (STAGE 2, SURVEILLANCE, RECERTIFICATION/APPROVAL AND SPECIAL)
- APPENDIX F AUDIT REPORT (STAGE 1)
- APPENDIX G SUPPLEMENTAL AUDIT REPORT

\* NOTE: The forms can be used to report results of 2<sup>nd</sup> party/supplier audits or 3<sup>rd</sup> party/certification audits. The term "Approval" is associated to 2<sup>nd</sup> party audits and the term "certification/recertification" is associated to 3<sup>rd</sup> party/certification audits.

		9101 FORMS AND TEMPLATES (APPENDICES)						
APPENDIX		A	B	C	D	E	F	G
AUDIT STAGE		A	B	C	D	E	F	G
STAGE 1		(X)					X	
STAGE 2 (Initial Certification)		X**	X	X	X	X		(X)
SURVEILLANCE		X**	X	X	X	X		(X)
RECERTIFICATION		X**	X	X	X	X		(X)

**X = Mandatory      (X) = Optional**

\*\* See clause 4.2.2.6 for the application of Appendix A.

**FIGURE 3: RELATIONSHIPS BETWEEN APPENDICES AND AUDIT STAGES**

**APPENDIX A – OBJECTIVE EVIDENCE RECORD (OER)**

<sup>1</sup> Auditing Company Name	<b>Objective Evidence Record (OER)</b>	<sup>2</sup> Auditing Company Logo
<sup>3</sup> Organization:	<sup>4</sup> Audit Number:	
	<sup>5</sup> Site/OIN:	<sup>6</sup> Issue Date:
<sup>7</sup> Standard: 9100 <input type="checkbox"/> /9110 <input type="checkbox"/> /9120 <input type="checkbox"/>		

Item #	<sup>8</sup> Quality Management System Requirements	<sup>9</sup> C	<sup>10</sup> NCR	<sup>11</sup> Objective Evidence/Comments (e.g., observations, OFIs)
<b>4. QUALITY MANAGEMENT SYSTEM</b>				
<b>4.1 General requirements</b>				
01	A QMS has been established, documented, implemented, and maintained with evidence of continual effectiveness improvement			
02	<b>Approvals, certificates, ratings, licenses, and permits are in place (9110 only)</b>			Ref.:
03	<b>The QMS addresses customer, statutory, and regulatory requirements</b>			Examples ref.:
04	a. QMS processes have been determined and applied			
05	b. Sequence and interaction determined for QMS processes			Main process formally identified (e.g., list, flow diagram)
06	c. Criteria and methods determined to for effectively operate and control QMS processes			
07	d. Availability of resources and information necessary to support the operation and monitoring available for QMS processes			
08	e. QMS processes are monitored, measured, and analyzed			
09	f. Actions implemented to continually improve planned results			
10	Processes are managed in accordance with applicable Aerospace Quality Management Systems (AQMS) standards			
11	Outsourced processes are defined and controlled			List outsourced processes

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**OBJECTIVE EVIDENCE RECORD**

<b>Item #</b>	<b>Quality Management System Requirements</b>	<b>C</b>	<b>NCR</b>	<b>Objective Evidence/Comments (e.g., observations, OFIs)</b>
<b>4.2 Documentation requirements</b>				
<b>4.2.1 General</b>				
12	a. Documented statement of a quality policy			Quality policy ref.:
13	Documented quality objectives			Quality objectives ref.:
14	b. Documented quality manual			Quality manual ref.:
15	c. Documented procedures required by 9100-series standards			List of procedures ref.:
16	Documented records required by 9100-series standards			List of records ref.:
17	d. Necessary documents and records as per clause 4.2.1.d			
<b>18</b>	<b><i>Documented safety policy and safety objectives (9110 only)</i></b>			Safety policy/safety objectives ref.:
<b>19</b>	<b><i>Accessibility and awareness of personnel of relevant QMS documentation and changes</i></b>			
<b>4.2.2 Quality manual</b>				
20	Quality manual established, maintained and			
21	a. Includes the scope of the QMS			
22	Includes justification of exclusions			List excluded clauses:
23	b. Includes QMS documented procedures or reference to them			
24	c. Includes a description of the QMS processes and interactions			
	<b><i>d. Includes a description of the processes and procedures used for: (9110 only)</i></b>			
<b>25</b>	<b><i>• proficiency of personnel (9110 only)</i></b>			
<b>26</b>	<b><i>• rosters of certifying staff and personnel (9110 only)</i></b>			
<b>27</b>	<b><i>• training program (9110 only)</i></b>			
<b>28</b>	<b><i>• current approved technical data (9110 only)</i></b>			
<b>29</b>	<b><i>• performing preliminary inspection (9110 only)</i></b>			
<b>30</b>	<b><i>• acceptance of incoming articles (9110 only)</i></b>			
<b>31</b>	<b><i>• inspecting articles involved in an accident for hidden damage before MRO activities (9110 only)</i></b>			
<b>32</b>	<b><i>• conducting maintenance in compliance with customer, statutory and regulatory requirements (9110 only)</i></b>			
<b>33</b>	<b><i>• performing final inspection and 'return to service' of maintained articles (9110 only)</i></b>			
<b>34</b>	<b><i>• governing work performed at another location (9110 only)</i></b>			



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**OBJECTIVE EVIDENCE RECORD**

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**4.2.3 Control of documents**

35	Documents required by the QMS are controlled			
36	Records are controlled in accordance with clause 4.2.4			
37	Documented <b>PROCEDURE</b> exist and includes:			Procedure ref.:
38	a. approval process			
39	b. review, update, and re-approval process			
40	c. identification of changes and current revision status			
41	d. documents are available where needed			
42	e. documents are legible and identifiable			
43	f. external documents are identified and controlled			
44	g. obsolete documents are identified and controlled			

**4.2.4 Control of records**

45	Records (as required in 4.2.4) are established and controlled			
46	A documented <b>PROCEDURE</b> exists that includes controls for:			Procedure ref.:
47	• identification			
48	• storage			
49	• protection			
50	• retrieval			
51	• retention			
52	• disposition			
53	• <b>supplier created and/or retained records</b>			
54	Records are legible, identifiable and retrievable			Samples of records reviewed
55	<b>Records of product origin, conformity and shipment are maintained (9120 only)</b>			Samples of records reviewed
56	<b>Back-up procedures are defined for records stored in an electronic form (9120 only)</b>			Procedure ref.:
57	<b>Electronic records are secured and cannot be corrupted due to software or system changes (9120 only)</b>			

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**5. MANAGEMENT RESPONSIBILITY**

**5.1 Management commitment**

	Evidence of top management commitment includes:			Evidence ref.:
58	a. communicating importance of meeting customer, statutory, and regulatory requirements			
59	b. establishing a quality policy			
60	c. establishing quality objectives			
61	d. conducting management reviews			
62	e. ensuring availability of resources			
<b>63</b>	<b>f. establishing the safety policy (9110 only)</b>			
<b>64</b>	<b>g. ensuring safety objectives are established (9110 only)</b>			

**5.2 Customer focus**

	Top management ensures:			
65	• customer requirements are determined and met			
<b>66</b>	• <b>product conformity measured</b>			
<b>67</b>	• <b>on-time delivery (OTD) performance is measured</b>			
<b>68</b>	• <b>actions are taken, if planned results are not/will not be achieved</b>			

**5.3 Quality policy**

	Top management ensures that the quality policy:			
69	a. is appropriate			
70	b. includes a commitment to comply with requirements and continually improve the effectiveness of the QMS			Commitment ref.:
71	c. provides a framework to establish and review its quality objectives			
72	d. is communicated and understood			
73	e. is reviewed for suitability			

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**5.4 Planning**

**5.4.1 Quality objectives**

	Top management ensures that quality objectives are:			
74	• established			
75	• measurable			
76	• consistent with the quality policy			

**5.4.2 Quality management system planning**

	Top management ensures:			
77	a. QMS planning is carried out to meet the requirements defined in clause 4.1 and the quality objectives			
78	b. QMS integrity is maintained when changes occur			

**5.4.3 Safety objectives (9110 only)**

	Top management ensures safety objectives are:			
79	• <i>established</i>			
80	• <i>measurable</i>			
81	• <i>consistent with the safety policy</i>			

**5.5 Responsibility, authority and communication**

**5.5.1 Responsibility and authority**

	Top management ensures that responsibilities and authorities:			
82	• are defined			
83	• communicated			

**5.5.1.1 Accountable executive manager (9110 only)**

84	<i>A manager has been appointed by top management with authority to ensure that all necessary resources are obtained</i>			

**5.5.1.2 Maintenance manager(s) (9110 only)**

85	<i>Top management appointed a manager(s) responsible for assuring that all maintenance required is performed in accordance with all requirements</i>			

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**5.5.2 Management representative**

86	Top management appointed Management Representative exists			
	Management Representative's responsibility and authority include:			Job description ref.:
87	a. ensuring QMS processes are established, implemented, and maintained			
88	b. reporting QMS performance			
89	c. promoting customer requirements awareness			
<b>90</b>	<b>d. organizational freedom and unrestricted access to top management for resolution of quality management issues</b>			
<b>91</b>	<b>e. reporting the performance of the QMS and needs for improvement (9110 only)</b>			

**5.5.3 Internal communication**

92	Top management ensures communication processes are established and takes place on the effectiveness of the QMS			

**5.6 Management review**

**5.6.1 General**

93	Top management reviews the QMS for suitability, adequacy, and effectiveness at planned intervals			
94	Management Review records are maintained			Management Review record(s) ref.:
<b>95</b>	<b>Management Review includes assessing opportunities for improvement and the need for changes to the safety policy and safety objectives (9110 only)</b>			

**5.6.2 Review input**

	Inputs to Management Reviews include:			
96	a. audit results			
97	b. customer feedback			
98	c. process performance and product conformity			
99	d. preventive and corrective actions			
100	e. follow-up actions from previous reviews			
101	f. changes that could possibly effect the QMS			
102	g. improvement recommendations			
<b>103</b>	<b>h. audit results and request for corrective actions (9110 only)</b>			
<b>104</b>	<b>i. achievement, adequacy, and effectiveness of the personnel training program (9110 only)</b>			
<b>105</b>	<b>j. changes to requirements that could impact the organization (9110 only)</b>			

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<b>5.6.3 Review output</b>				
	Management Review outputs include:			
106	a. QMS process improvements			
107	b. customer requirement related product improvements			
108	c. identification of resource needs			

<b>5.7 Safety policy (9110 only)</b>				
	<i>Top management ensures the safety policy:</i>			
109	<i>a. is appropriate</i>			
110	<i>b. includes a commitment to comply with requirements and continually improve safety</i>			
111	<i>c. provides a framework for establishing and reviewing safety objectives</i>			
112	<i>d. is communicated and understood</i>			
113	<i>e. is reviewed for continuing suitability</i>			

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**6. RESOURCE MANAGEMENT**

**6.1 Provision of resources**

	Resources determined and provided to:			
114	a. implement and maintain the QMS and improve its effectiveness			
115	b. enhance customer satisfaction			
<b>116</b>	<b><i>A system is in place to continually assess the availability of tools, technical data, and qualified personnel (9110 only)</i></b>			

**6.2 Human resources**

**6.2.1 General**

117	Personnel competency is based on education, training, skills, and experience			
<b>118</b>	<b><i>Certificated personnel meet and maintain eligibility requirements (9110 only)</i></b>			
<b>119</b>	<b><i>Process exist for the qualification/surveillance of non-certificated personnel who perform maintenance, repair, and overhaul activities (9110 only)</i></b>			

**6.2.2 Competence, training and awareness**

120	a. Competence for personnel affecting product quality is determined			
121	b. Training to achieve competence is provided			
122	c. Evaluates effectiveness of actions taken			
123	d. Ensures personnel are aware of the relevance and importance of their activities and contribution to realizing of quality objectives			
124	e. Maintains appropriate records per clause 6.2.2 requirements			Training record(s) ref.:
<b>125</b>	<b><i>f. Personnel performing maintenance, repair, and overhaul activities and release of articles are qualified and certified (9110 only)</i></b>			
<b>126</b>	<b><i>g. A training program exist that ensures personnel remain compliant to procedures, human factors, technical knowledge, and requirements (9110 only)</i></b>			Training program ref.:
<b>127</b>	<b><i>h. Recurrent training is provided that covers changes in requirement, procedures, and maintenance standards (9110 only)</i></b>			

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**6.3 Infrastructure**

	Determine, provide, and maintain an infrastructure needed to achieve product conformity including:			
128	a. buildings, workspace, and associated utilities			
129	b. process equipment			
130	c. supporting services			
<b>131</b>	<b>d. suitable facilities for performing maintenance, repair, and overhaul activities away from its' fixed location (9110 only)</b>			

**6.4 Work environment**

132	Determine and manage the work environment needed to achieve product conformity			

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**7. PRODUCT REALIZATION**

**7.1 Planning of product realization**

133	Plan and develop consistent product realization processes			
	Product realization planning reflect the following:			
134	a. quality objectives and product requirements			
135	b. processes, documents, and resources			
136	c. verification, validation, monitoring, measurement, inspection, and test activities			
137	d. records			Planned product realization record(s) ref.:
<b>138</b>	<b>e. product configuration</b>			
<b>139</b>	<b>f. resources</b>			
<b>140</b>	<b>g. identification of resources to ensure airworthy (9110 only)</b>			
<b>141</b>	<b>h. safety objectives and product requirements (9110 only)</b>			
142	Planning is in a suitable form for the organization's operations			

**7.1.1 Project management (not applicable to 9120)**

<b>143</b>	<b>Product realization is planned and managed in a structured and controlled manner to meet requirements at acceptable risk</b>			

**7.1.1 (as in 9120) Configuration management (9120 only) – see 7.1.3 listing below**

**7.1.2 Risk management (not applicable to 9120)**

<b>144</b>	<b>Establish, implement, and maintain a process for managing risk</b>			
	<b>Risk management includes, as appropriate:</b>			
<b>145</b>	<b>a. responsibilities for risk management</b>			
<b>146</b>	<b>b. definition of risk criteria</b>			
<b>147</b>	<b>c. identification, assessment, and communication of risks</b>			
<b>148</b>	<b>d. identification, implementation, and management of actions to mitigate risks that exceed defined risk acceptance</b>			
<b>149</b>	<b>e. acceptance of remaining risks after implementation of mitigating actions</b>			



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**7.1.2 (as in 9120) Control of work transfers (9120 only) - see 7.1.4 below**

**7.1.3 Configuration management**

150	<i>Establish, implement, and maintain a configuration management process that includes, as appropriate:</i>			
151	<i>a. configuration management planning</i>			
152	<i>b. configuration identification</i>			
153	<i>c. change controls</i>			
154	<i>d. configuration status accounting</i>			
155	<i>e. configuration audits</i>			

**7.1.4 Control of work transfers**

156	<i>Establish, implement, and maintain a process to plan and control work transfers including:</i>			
157	<i>• temporary or permanent transfers</i>			
158	<i>• verification of work conformity to requirements</i>			

**7.2 Customer-related processes**

**7.2.1 Determination of requirements related to the product**

159	a. Determine customer requirements, including delivery and post-delivery activities			
160	b. Determine requirements not stated by the customer, but necessary for specified or intended use			
161	c. Determine applicable statutory and regulatory requirements			
162	d. Determine any additional necessary requirements			

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**7.2.2 Review of requirements related to the product**

164	Reviews product requirements prior to commitment to supply a product			
	Reviews conducted to the customer documentation to ensure:			
165	a. Product requirements are defined			
166	b. Differing contract requirements are resolved			
167	c. Organization has the ability to meet the requirements			
<b>168</b>	<b>d. contractual requirements are being reviewed for special product requirements (9110 only)</b>			
<b>169</b>	<b>d. Special product requirements are determined</b>			
<b>170</b>	<b>e. Risks have been identified</b>			
171	Records of reviews and actions are maintained			Review record(s) ref.:
172	Where the customer provides no documented requirements, they are confirmed before acceptance			
173	Documents are amended and personnel made aware when product requirements are changed			
<b>174</b>	<b>Contract processes include provisions for disposition of out-of-scope defects discovered during maintenance (9110 only)</b>			

**7.2.3 Customer communication**

	Implements effective customer communications for:			
175	a. product information			
176	b. enquiries, contracts, or order handling			
177	c. customer feedback			

**7.3 Design and development (D&D)**

**7.3.1 Design and development planning (not applicable to 9120)**

178	Plans and controls the product D&D process			
	D&D planning includes:			
179	a. defined stages			
180	b. reviews, verifications, and validations for each stage			
181	c. responsibilities and authorities			
<b>182</b>	<b>Where appropriate, the organization divides the D&amp;D effort into distinct activities and defines the tasks, resources, responsibilities, design content, input/output data, and design constraints</b>			
<b>183</b>	<b>D&amp;D tasks are based on the safety and functional objectives of the product to customer, statutory, and regulatory requirements</b>			
<b>184</b>	<b>D&amp;D planning considers the ability to produce, inspect, test, and maintain the product</b>			
185	Interfaces between groups involved are managed to ensure effective communication and clear assignment of responsibility			
186	Planning output is updated as the D&D progresses			

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**7.3.2 Design and development inputs (not applicable to 9120)**

187	Product input requirements are determined and records maintained			Product input requirement record ref.:
	D&D inputs include:			
188	a. functional and performance requirements			
189	b. applicable statutory and regulatory requirements			
190	c. information derived from previous designs			
191	d. other essential D&D requirements			
192	Inputs are reviewed for adequacy			

**7.3.3 Design and development outputs (not applicable to 9120)**

193	Outputs are in a suitable form for verification against the inputs and are approved prior to release			
	D&D outputs:			
194	a. meet the input requirements			
195	b. provide appropriate information for purchasing, production, and service			
196	c. contain or reference product acceptance criteria			
197	d. specify product characteristics			
<b>198</b>	<b>e. specify critical items, including any key characteristics and specific actions to be taken</b>			
<b>199</b>	<b>Outputs define the data required for identification, manufacturing and inspecting including:</b>			
<b>200</b>	<b>drawings, part lists, and specifications</b>			
<b>201</b>	<b>material, process, manufacturing, and assembly data</b>			

**7.3.4 Design and development review (not applicable to 9120)**

	D&D reviews are performed to:			
202	a. evaluate the ability of the results to meet requirements			
203	b. identify any problems and propose actions			
<b>204</b>	<b>c. authorize progression to the next stage</b>			
205	Participants in reviews include representatives from all functions concerned with the D&D stage(s) being reviewed			
206	Records of reviews and actions are maintained			Review record(s) ref.:

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**OBJECTIVE EVIDENCE RECORD**

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**7.3.5 Design and development verification (not applicable to 9120)**

207	Verifications performed in accordance with planned arrangements			
208	Records of verifications and actions are maintained			Verification record(s) ref.:

**7.3.6 Design and development validation (not applicable to 9120)**

209	Validations performed in accordance with planned arrangements			
210	Records of validations and actions are maintained			Validation record(s) ref.:

**7.3.6.1 Design and development verification and validation testing (not applicable to 9120)**

211	<i>Verification and validation tests are planned, controlled, reviewed, and documented to ensure and/or prove the following:</i>			
212	<i>a. test plans identify the tested product, resources used, define test objectives and conditions, parameters recorded, and acceptance criteria</i>			
213	<i>b. test procedures describe the method of operation, test performance, and record of the results</i>			
214	<i>c. correct configuration of the product for test</i>			
215	<i>d. requirements of the test plan/procedures followed</i>			
216	<i>e. acceptance criteria are met</i>			

**7.3.6.2 Design and development verification and validation documentation (not applicable to 9120)**

217	<i>Reports, calculations, test results, etc. demonstrate product definition meets the specified requirements for all operational conditions</i>			

**7.3.7 Control of design and development changes (not applicable to 9120)**

218	D&D changes are identified and records maintained			D&D change record(s) ref.:
219	Changes are reviewed, verified, validated, and approved before implementation			
220	Records of the change reviews and any actions are maintained			Change review record(s) ref.:
221	<i>D&amp;D changes are controlled in accordance with the configuration management process</i>			

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**OBJECTIVE EVIDENCE RECORD**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
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**7.4 Purchasing**

**7.4.1 Purchasing process**

222	Purchased product conforms to specified requirements			
223	<i>Responsibility evident for product conformity for all purchased products (including product from customer directed suppliers)</i>			
224	<i>Suppliers hold required approvals and certificates (9110 only)</i>			
225	<i>Purchasing process satisfy applicable requirements for the use of non-certificated suppliers (9110 only)</i>			
226	Criteria for selection, evaluation, and re-evaluation are established			
227	Records of evaluations and actions arising from the evaluations are maintained			Supplier evaluation record(s) ref.:
228	<i>a. Register of approved suppliers including scope of approval is available</i>			Approved supplier register ref.:
229	<i>b. Supplier performance is periodically reviewed</i>			
230	<i>c. Process for dealing with suppliers that do not meet requirements is defined</i>			
231	<i>d. The organization and all suppliers use customer-approved special process sources</i>			
232	<i>e. The process, responsibilities, and authority for the approval status decision, changes, and conditions for controlled use determined</i>			
233	<i>f. The risk when selecting and using suppliers is determined and being managed</i>			
234	<i>g. Appropriate measures are in place to prevent the purchase of counterfeit and suspect unapproved parts (9110 only)</i>			
235	<i>g. Controls exist to prevent the purchase of counterfeit and suspected unapproved parts (9120 only)</i>			

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**OBJECTIVE EVIDENCE RECORD**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
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**7.4.2 Purchasing information**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
	Purchasing information includes (where appropriate):			Reviewed supplier contract(s) ref.:
236	a. product, procedures, processes, and equipment approvals			
237	b. personnel qualifications			
238	c. QMS requirements			
239	<b>d. revision status relevant technical data</b>			
240	<b>e. requirements for design, test, inspection, verification, use of statistical techniques, and related instructions for acceptance (including critical items and key characteristics)</b>			
241	<b>f. requirements for test specimens</b>			
242	<b>g. requirements for the suppliers to</b> <ul style="list-style-type: none"> <li>- notify of nonconforming product</li> <li>- receive nonconforming product disposition approvals</li> <li>- notify of changes to product, processes, suppliers, and facilities</li> <li>- flow down requirements</li> </ul>			
243	<b>h. records retention requirements</b>			
244	<b>i. right of access</b>			
245	<b>j. specific approval requirements (9110 only)</b>			
246	<b>j. requirements for certificate of conformity, test reports, and/or airworthiness certificate (9120 only)</b>			
247	<b>k. format and content of the release documentation package (9110 only)</b>			
248	<b>l. conditions where defects and un-airworthy conditions must be reported and dispositioned (9110 only)</b>			
249	Adequacy of purchase requirements prior to issuance			

**7.4.3 Verification of purchased product**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
250	Activities to ensure purchased product meets purchase requirements have been established and implemented			Samples of purchased product(s) reviewed including contract ref.:
251	<b>A process of product recall is implemented when product released for use prior to completion of required incoming verification</b>			
252	<b>Requirements for supplier delegations defined and a register of delegations maintained</b>			
253	Purchasing information defines information about the verification activities at the supplier's premises			Reviewed supplier contract(s) ref.:

**7.5 Production and service provision**

**7.5.1 Control of production and service provision**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
254	Production and service provisions are planned and achieved under controlled conditions including:			
255	a. availability of product characteristics			
256	b. availability of necessary work instructions			Reviewed work instruction(s) ref.:
257	c. use of suitable equipment			
258	d. availability and use of monitoring and measurement (M&M) equipment			

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**OBJECTIVE EVIDENCE RECORD**

<b>Item #</b>	<b>Quality Management System Requirements</b>	<b>C</b>	<b>NCR</b>	<b>Objective Evidence/Comments (e.g., observations, OFIs)</b>
259	e. implementation of M&M			
260	f. implementation of product release, delivery, and post-delivery activities			
<b>261</b>	<b>g. accountability for all product during production</b>			
<b>262</b>	<b>h. evidence that all operations have been completed as planned (9110 addition - per approved technical data, design data approval holder, approved design organization, or acceptable to the Authority)</b>			Reviewed job cards, routers, etc. ref.:
<b>263</b>	<b>i. provisions for a Foreign Object Damage and Debris (FOD) program</b>			
<b>264</b>	<b>j. monitoring and control of utilities and supplies</b>			
<b>265</b>	<b>k. criteria for workmanship</b>			
<b>266</b>	<b>l. compliance with standards, quality plans, manufacturing recommendations, customer specifications, and/or documented procedures (9110 only)</b>			
<b>267</b>	<b>m. maintaining a list of approved maintenance/repair process capabilities and/or current ratings (9110 only)</b>			List ref.:
<b>268</b>	<b>n. assuring that maintenance operations do not adversely affect areas outside the scope of the planned maintenance (9110 only)</b>			
<b>269</b>	<b>o. equipment, tools, and materials recommended by the manufacturer and acceptable to the customer and/or Authority (9110 only)</b>			
	Planning appropriately considers:			
270	• managing critical items and key characteristics			
271	• measurement tooling			
272	• identifying in-process verification points			
273	• special processes			

**7.5.1.1 Production process verification (not applicable to 9110)**

<b>274</b>	<b>A representative item from the first production run is used to verify production processes, documentation, and tooling and is capable of producing parts and assemblies that meet requirements</b>			Sample of First Article Inspection (FAI) record:

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**OBJECTIVE EVIDENCE RECORD**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
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**7.5.1.1 Maintenance process verification (9110 only)**

275	<i>New maintenance processes are documented, qualified, and approved by the customer and/or Authority</i>			

**7.5.1.2 Control of production (maintenance - 9110) process changes**

276	<i>Personnel authorized to approve changes are defined</i>			Record ref.:
277	<i>Changes affecting processes, equipment, tools, or software are controlled and documented</i>			
278	<i>Changes are assessed to confirm that product conformity has not been adversely effected</i>			

**7.5.1.3 Control of production (maintenance-9110) equipment, tools and software programs**

279	<i>Production equipment, tools, and software used to automate, control, or monitor processes are validated prior to release for production and are maintained (not applicable to 9110)</i>			Sample(s) of validation record(s):
280	<i>Maintenance equipment, tools, and programs used to automate and control/monitor processes are defined by technical data prior to use (9110 only)</i>			
281	<i>Maintenance equipment, tools, and programs shall be maintained and inspected periodically (9110 only)</i>			
282	<i>Storage requirements are defined for production (maintenance-9110) equipment or tooling</i>			

**7.5.1.4 Post-delivery support**

	<i>Post-delivery support includes applicable:</i>			
283	<i>a. collection and analysis of in-service data</i>			
284	<i>b. actions to be taken, including investigation and reporting, when problems are detected after delivery</i>			
285	<i>c. control and updating technical documentation (data)</i>			
286	<i>d. approval, control, and use of repair schemes</i>			
287	<i>e. controls required for off-site work</i>			



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**OBJECTIVE EVIDENCE RECORD**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
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**7.5.2 Validation of processes for production and service provision (not applicable to 9120)**

288	Special processes are validated prior to use			
289	Special process validations demonstrate the ability to achieve planned results			
	Established arrangements including, as applicable,			
290	a. criteria for review and approval			
291	b. approval of equipment and qualification of personnel			
292	c. use of specific methods and procedures			
293	d. requirements for records			
294	e. revalidation			

**7.5.3 Identification and traceability**

295	Products identified throughout product realization			
<b>296</b>	<b>Product configuration maintained</b>			
297	Product status is identified throughout product realization			
<b>298</b>	<b>Controls in place for media used for acceptance</b>			
299	When required, traceability is controlled through unique product identifications and records are maintained			Traceability record(s) ref.:
<b>300</b>	<b>Product identification and traceability is maintained by suitable means from receipt; during splitting, storage, packaging, and preservation; and until delivery (9120 only)</b>			Samples of product reviewed (identification ref.):

**7.5.4 Customer property**

301	Customer property is adequately controlled through the identification, verification, protection, and safeguarding			
302	Lost, damaged, or product unsuitable for use is reported to the customer and records maintain			Customer property record(s) ref.:
<b>303</b>	<b>Verifications include appropriate release documents (9110 only)</b>			

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**OBJECTIVE EVIDENCE RECORD**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
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**7.5.5 Preservation of product**

304	Products are preserved during internal processing and delivery			
305	Preservation includes identification, handling, packaging, storage, and protection			
306	Preservation controls are applied to the constituent parts			
<b>307</b>	<b>Maintenance items are segregated (9110 only)</b>			
	<i>Preservation of product includes appropriate:</i>			
<b>308</b>	<i>a. cleaning</i>			
<b>309</b>	<i>b. foreign object controls</i>			
<b>310</b>	<i>c. special handling for sensitive products</i>			
<b>311</b>	<i>d. marking and labeling</i>			
<b>312</b>	<i>e. shelf life control and stock rotation</i>			
<b>313</b>	<i>f. special handling for hazardous materials</i>			
<b>314</b>	<b>Serviceable parts are physically segregated from unserviceable parts (9120 only)</b>			

**7.6 Control of monitoring and measuring (M&M) equipment**

315	Product M&M and appropriate M&M equipment have been determined			
<b>316</b>	<b>A register of the M&amp;M equipment is maintained</b>			Register ref.:
317	Processes are defined for M&M equipment calibration (and/or verification), including equipment type, identification, location, frequency, check method, and acceptance criteria			Process definition ref.:
318	M&M can and are carried out consistent with the M&M requirements			
<b>319</b>	<b>Environmental conditions are suitable for the calibrations, inspections, measurements, and testing</b>			
320	a. M&M equipment are calibrated (and/or verified) at specified intervals against traceable standards			
321	b. M&M equipment are adjusted, when necessary			
322	c. M&M equipment have unique identifiers			Equipment reviewed ref.:
323	d. M&M equipment are safeguarded from adjustments			
324	e. M&M equipment are adequately protected			
<b>325</b>	<b>A M&amp;M equipment calibration (and/or verification) recall process exists</b>			
326	Previous results are assessed, recorded, and acted upon when M&M equipment is found out-of-conformance			
327	Calibration (and/or verification) records are retained			Calibration record(s) ref.:
328	Software used for M&M is confirmed before initial use and reconfirmed, as necessary			

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**OBJECTIVE EVIDENCE RECORD**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
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**8. MEASUREMENT, ANALYSIS AND IMPROVEMENT**

**8.1 General**

329	Monitoring, measurement, analysis, and improvement processes planned and implemented to:			
330	a. Demonstrate product conformity			
331	b. Ensure QMS conformity			
332	c. Improve QMS effectiveness			
333	Applicable methods (including statistical techniques) have been determined and are being used			Samples of method(s):

**8.2 Monitoring and measurement (M&M)**

**8.2.1 Customer satisfaction (CS)**

334	Methods for obtaining/using customer perception data are in place			Method(s) ref.:
335	<i>CS information includes product conformity, on-time delivery (OTD), customer complaints, and corrective action requests</i>			
336	<i>Improvement plans to address CS deficiencies are in place</i>			Improvement plan(s) ref.:

**8.2.2 Internal audit**

337	Internal audits conducted at planned intervals			
338	a. Audits ensure conformity to planned arrangements, requirements of this standard and organization's QMS requirements			
339	b. Audits ensure the QMS is effectively implemented and maintained			
340	Audits based on status and importance of processes and previous audit results to defined criteria, scope, frequency, and methods			
341	Auditors do not audit their own work			
342	A documented internal audit <b>PROCEDURE</b> exists			Procedure ref.:
343	Audit records are maintained			Audit record(s) ref.:
344	Timely corrective actions are taken by management in audited areas			
345	Follow-up activities verify and report actions taken			

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**OBJECTIVE EVIDENCE RECORD**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
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**8.2.3 Monitoring and measurement (M&M) of processes**

346	Methods for M&M of QMS processes are in place and demonstrate that processes achieve planned results			
347	Correction and corrective actions are taken when results are not achieved			
	<b>Process nonconformities result in:</b>			
<b>348</b>	<b>a. actions to correct the nonconforming process</b>			
<b>349</b>	<b>b. evaluations of the affect on products</b>			
<b>350</b>	<b>c. determinations of the affect on other processes or products</b>			
<b>351</b>	<b>d. control of nonconforming product (NCP)</b>			

**8.2.4 Monitoring and measurement (M&M) of product**

352	M&M of product characteristics are performed and maintained			
<b>353</b>	<b>Maintenance operations are completed, as planned (9110 only)</b>			
<b>354</b>	<b>Acceptance measurement requirements are documented and include:</b>			Revision level
<b>355</b>	<b>a. acceptance and/or rejection criteria</b>			
<b>356</b>	<b>b. the sequence where measurement and testing operations are planned (including customer and/or Authority inspection (9110 only)</b>			
<b>357</b>	<b>c. records of measurement results</b>			Revision level
<b>358</b>	<b>d. specific measurement instruments required</b>			
<b>359</b>	<b>e. the inspection/testing operations that are to be verified and/or witnessed (9110 only)</b>			
<b>360</b>	<b>Critical items are controlled and monitored</b>			
<b>361</b>	<b>Sampling plan are justified on the basis of recognized statistical principles and appropriate for use</b>			
<b>362</b>	<b>Defects are identified during maintenance (that are outside the scope of the contract) are processed per customer and/or Authority requirements (9110 only)</b>			
<b>363</b>	<b>Product released for use prior to the completion of planned activities is controlled to allow for recall</b>			
364	Records reflect person(s) authorizing release of product for delivery			Revision level
<b>365</b>	<b>Records show that products meet defined requirements</b>			Revision level
366	Release of product and/or delivery of services are not performed until all planned activities are accomplished or without Authority/customer approval			
<b>367</b>	<b>Documents required to accompany the product are present at delivery</b>			
<b>368</b>	<b>Documents required to accompany the product are being provided and procedures are implemented for the preparation and completion of Authority documentation (9110 only)</b>			

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**OBJECTIVE EVIDENCE RECORD**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
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**8.2.5 Evidence of conformity (9120 only)**

369	<i>Product conformity evidence is provided to customers, when required</i>			
370	<i>For split product, the quantity delivered, purchase order number, and both customer and supplier's names are annotated on copies of original documents</i>			
371	<i>Certifying statements reference the original manufacturer's traceable documents and applicable requirements that are retained by the organization (applicable where a formal customer agreement is in place)</i>			

**8.3 Control of nonconforming product (NCP)**

372	NCP is identified and controlled			
373	A documented PROCEDURE exist for handling of NCP			Procedure ref:
374	<i>The responsibility and authority for the review and disposition of nonconforming product are defined</i>			
375	<i>The process for approving personnel making these decisions is defined</i>			
	NCP controls include:			
376	a. actions to eliminate the nonconformity			
377	b. use, release, or acceptance by customer concession			
378	c. actions to preclude its intended use or application			
379	d. actions on the effects of NCP, when detected after delivery or use, <i>including timely reporting</i>			
380	<i>e. actions to contain the nonconformity effect on other processes or products</i>			
381	<i>Dispositions of use-as-is (UAI) or repair is used only after approval from design responsible organizations</i>			
382	<i>Dispositions of UAI or repair are not used without customer authorization</i>			
383	<i>Scrap product is marked or positively controlled</i>			
384	Corrected NCP is subjected to re-verification			
385	NCP records are maintained			NCP record(s) ref.:

**8.4 Analysis of data**

386	Data to demonstrate the suitability and effectiveness of the QMS is determined, collected, and analyzed			
	Analysis of data includes:			
387	a. customer satisfaction			
388	b. conformity to product requirements			
389	c. characteristics and trends of processes and products			
390	d. supplier performance			
391	<i>e. human factors events (9110 only)</i>			

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**OBJECTIVE EVIDENCE RECORD**

Item #	Quality Management System Requirements	C	NCR	Objective Evidence/Comments (e.g., observations, OFIs)
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**8.5 Improvement**

**8.5.1 Continual improvement**

392	The QMS is continually improved through the quality policy, quality objectives, audit results, analysis of data, corrective/preventive actions, and management reviews			
<b>393</b>	<b><i>Improvements and the evaluation of effectiveness are monitored</i></b>			

**8.5.2 Corrective action (CA)**

394	Actions are taken to eliminate the causes of nonconformities			
395	A documented <b>PROCEDURE</b> exist that includes:			Procedure ref.:
396	a. reviewing of nonconformities			
397	b. determining the causes of nonconformities			
398	c. evaluating action to prevent recurrence			
399	d. determining and implementing actions			
400	e. record of actions taken			CA record(s) ref.:
401	f. reviewing the effectiveness of corrective actions			
<b>402</b>	<b><i>g. flowing down CA requirements to suppliers</i></b>			
<b>403</b>	<b><i>h. actions where timely and/or effective CAs are not achieved</i></b>			
<b>404</b>	<b><i>i. determining if additional NCP exists</i></b>			
<b>405</b>	<b><i>j. evaluating action based on human factors (9110 only)</i></b>			

**8.5.3 Preventive action (PA)**

406	Actions taken to eliminate the causes of potential nonconformities			
407	A documented <b>PROCEDURE</b> exist that includes:			Procedure ref.:
408	a. determining potential nonconformities and their causes			
409	b. evaluating action to prevent occurrence			
410	c. determining and implementing action			
411	d. record of actions taken			PA record(s) ref.:
412	e. reviewing the effectiveness of PA			
<b>413</b>	<b><i>f. evaluating action based on human factors (9110 only)</i></b>			

<b>Auditor Name(s)</b>	<b>Signature:</b>
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**FORM INSTRUCTIONS**

**APPENDIX A – OBJECTIVE EVIDENCE RECORD (OER)**

This form should be used during the “on-site” quality management system audits for recording the objective evidence that is used to determine conformity with the related quality management systems requirements.

It can also be used to record auditor notes/comments and Opportunities for Improvement (OFI).

NOTE: This OER summarizes the requirements and is not intended to add or take away from the stated requirements. Where a conflict exists, the stated requirement of the applicable standard takes precedence.

1	Include the name of the organization conducting the audit.
2	Include the logo of the organization conducting the audit (optional).
3	Identify name of organization audited as noted, or to be noted, on the certificate or approval.
4	Identify associated audit/audit report number.
5	Identify site, OASIS Identification Number (OIN), and location of the audited organization as noted, or to be noted, on the certificate or approval.
6	Indicate date the OER was completed.
7	Tick box(es) (✓) of the applicable standard(s) (i.e., 9100, 9110, 9120).
8	<p>Summarized requirement description.</p> <p>The description of the additional aviation, space, and defense requirements are shown as bold/italic text.</p> <p>All descriptions without bracketed standard reference are applicable for all standards: 9100, 9110, and 9120. Descriptions with a bracketed standard reference are applicable for the indicated standard only (e.g., item 18 - Documented safety policy and safety objectives (9110 only), is applicable to 9110 quality management system only).</p>
9	<p><u>Conforming (C)</u>: Enter a mark:</p> <ul style="list-style-type: none"> <li>– (X, S, √, etc.) to indicate that the requirement was audited and found to be conforming.</li> <li>– “N/E” to indicate not evaluated.</li> <li>– “N/A” to indicate not applicable.</li> <li>– “EX” to indicate an acceptable exclusion.</li> </ul>
10	<u>Nonconformity Report (NCR)</u> : Record reference to the applicable NCR number.
11	<p><u>Objective Evidence/Comments/OFIs</u>: Record objective evidence reviewed during the assessment and any applicable comments. The prefilled text in this column is for guidance and the objective evidence to be recorded should not be limited to this. Typical examples of objective evidence are reviewed documents, including records (e.g., procedures, shop orders/travelers, job descriptions, process sheets, training records, products, verification records).</p> <p>It is also possible to include observed concerns or improvement opportunities for improvement (OFI’s).</p> <p>NOTE 1: The completion of this information should start during the Stage 1 phase (record of the quality manual and procedures), then should be carried over to the on-site audit to record what was observed.</p> <p>NOTE 2: If the clauses and sub-clauses are associated with processes that are addressed on a PEAR, the objective evidence can be mentioned in the PEAR. In such case, the PEAR number should be referenced in this column.</p>

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**APPENDIX B – NONCONFORMITY REPORT (NCR)**

<sup>1</sup> Auditing Company Name		<b>Nonconformity Report (NCR)</b>		<sup>2</sup> Auditing Company Logo
<sup>3</sup> Organization:		<sup>4</sup> Audit Number:		
<sup>5</sup> Site/OIN:		<sup>4</sup> NCR Number:		
		<sup>6</sup> Issue Date:		
<b><sup>7</sup> SECTION 1 - DETAILS OF NONCONFORMITY:</b>				
<sup>8</sup> Process/Area/Department:				
<sup>9</sup> Requirement/Clause No.(s):		<sup>10</sup> Classification (ma/mi):		
<sup>11</sup> Statement of Nonconformity:				
<sup>12</sup> Objective Evidence:				
<sup>13</sup> Due Date:				
<sup>14</sup> Auditor		<sup>15</sup> Auditee Representative Acknowledgement		
NAME:	Signature:	Name:	Signature:	
<b><sup>7</sup> SECTION 2- AUDITEE PLANNED ACTIONS</b> (attach separate sheet, as needed)				
<sup>16</sup> Containment Action(s), including correction with supporting completion date(s):				
		<sup>17</sup> Planned Completion Date:		
		<sup>18</sup> Actual Completion Date:		
<sup>19</sup> Root Cause:				
		<sup>20</sup> Cause Code:		
<sup>21</sup> Corrective Action(s), including supporting completion date(s):				
		<sup>22</sup> Planned Completion Date:		
		<sup>23</sup> Actual Completion Date:		
<sup>15</sup> Auditee Representative Name and Signature:		Date:		
<sup>24</sup> Auditor Signature for Acceptance of C/A(s):		Date:		
<b><sup>25</sup> SECTION 3 - DETAILS OF AUDITOR VERIFICATION OF ACTION:</b>				
<sup>26</sup> SECTION 4 - NCR CLOSURE (Auditor Name /Signature/Date):		<sup>27</sup> Approved by Audit Team Leader (Name/Signature/Date):		



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<b>FORM INSTRUCTIONS</b>
<b>APPENDIX B – NONCONFORMITY REPORT (NCR)</b>
Each NCR shall contain only one nonconformity. When there are multiple instances of the same nonconformity against a specific clause, the auditor will issue one nonconformity against that clause (e.g., where numerous gages were found out of calibration, even though there were multiple instances, only one NCR will be issued).

<b>Ref. #:</b>	<b>Description:</b>
1	Include the name of the organization conducting the audit.
2	Include the logo of the organization conducting the audit (optional).
3	Identify name of organization audited as noted, or to be noted, on the certificate or approval.
4	Identify associated audit/audit report number and unique NCR number.
5	Identify site, OASIS Identification Number (OIN), and location of the audited organization as noted, or to be noted, on the certificate or approval.
6	Indicate date the NCR was issued to the organization.
7	<p>The NCR has four sections; each section shall be completed in order, at the various stages of the NCR:</p> <ul style="list-style-type: none"> <li>➤ Section 1 – documented by the auditor when recording the nonconformity.</li> <li>➤ Section 2 – documented by the auditee after the containment action, root cause analysis determination, and corrective action plans are defined; and the implementation of the corrective action by the auditee has occurred.</li> <li>➤ Section 3 – documented by the auditor after verification of the implementation and effectiveness of the corrective action by the auditor.</li> <li>➤ Section 4 – Documented by the auditor and audit team leader after final acceptance/closure of the NCR.</li> </ul> <p>NOTE: The audit team leader and auditee can agree on multiple stages for status reporting of the NCR for Section 2 (e.g., after correction, after planning the corrective action, after completion of the corrective action).</p>
8	<p>Identify the process, area, and/or department audited, including the actual activity within the process.</p> <p>NOTE: Use the same name for the process and/or activity as used in the QMS Process Matrix Report (see Appendix D).</p>
9	Identify the primary 9100/9110/9120 clause(s) and/or customer requirement to which the nonconformity was written.
10	<p>Determine the nonconformity classification (i.e., major, minor) according to the definitions provided in this standard (see clauses 3.2 and 3.3 of this standard).</p> <p>NOTE: An NCR <u>shall</u> be issued whenever an assessed process is declared "ineffective" (i.e., level 1 or 2) on a Process Effectiveness Assessment Report (PEAR).</p>
11	Provide a detailed description of the nonconforming situation. Ensure there is common understanding of the nonconformity by the auditor and auditee.
12	<p>List the applicable objective evidence, observed conditions, etc. (e.g., the identification of nonconforming documents, the identification of measuring and test equipment, the identification of the shop order that was not processed in conformance with the applicable procedures). If the observation of the auditor is the only evidence, document "auditor observation" and clearly describe the existing conditions/situation.</p> <p>NOTE: If appropriate, record multiple instances/examples of objective evidence to support a single nonconformity.</p>

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13	Identify the 'due date'; that is the date that the assessed organization has to return to the auditor the NCR completed with containment, root cause, corrective active, and planned corrective action completion date(s).
14	The name and signature of the auditor who identified and recorded the nonconformity. NOTE: Electronic signature may be used; in this case the following text can be added: 'signature on file' or 'electronic signature available', or similar.
15	The name and signature of the Auditee Representative (e.g., the Quality Manager, process owner) acknowledging receipt of the NCR. NOTE 1: In most cases, this is not the person interviewed. NOTE 2: Electronic signature may be used; in this case the following text can be added: 'signature on file' or 'electronic signature available', or similar.
16	The auditee shall describe the immediate actions ('fix now') taken to contain the nonconforming situation/conditions and to control any identified nonconforming products. NOTE: Any immediate containment action and correction can be reviewed by the audit team during the audit.
17	Identify the planned completion date for the immediate actions (see box 16).
18	Identify the actual completion date; that is the date on which the correction was implemented by the audited organization.
19	Provide a detailed description of the root cause(s) of the nonconformity; that is describe how/why the nonconformity occurred. NOTE: In most cases, documenting 'isolated case' or 'lack of instruction' are not appropriate 'root causes' as there are system causes in other domains (e.g., insufficient supporting or management processes).
20	Identify the associated cause code for the root cause. NOTE: For future use, the cause code listing will be defined by IAQG and published as a resolution. Until such list becomes available, fill in 'N/A' (Not Applicable).
21	Describe the action(s) to be taken to prevent the recurrence of the nonconformity.
22	Identify the planned completion date for the implementation of the corrective action(s).
23	Identify the actual completion date; that is the date on which the corrective action was implemented and determined effective by the audited organization. In case of a long implementation period, e.g., longer than 3 month, see note in box 7.
24	Identify the auditor signature after review and approval of the corrective action (i.e., containment actions, root cause identification, correction actions) submitted by the audited organization. NOTE 1: This can be done before the corrective action has been implemented by the organization, in order to prevent implementation of unacceptable actions. In case of review and acceptance at the moment of verification (see section 3), the date will be the same as in block 26. NOTE 2: Electronic signature may be used; in this case the following text can be added: 'signature on file' or 'electronic signature available', or similar.
25	Provide a summary of the verification activities performed by the auditor; that is what was verified to confirm corrective action implementation and effectiveness of actions taken to prevent recurrence.
26	Identify auditor signature and date of corrective action verification.
27	Name and signature of the audit team leader and date the NCR was closed. NOTE: Electronic signature may be used; in this case the following text can be added: 'signature on file' or 'electronic signature available', or similar.

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**APPENDIX C – PROCESS EFFECTIVENESS ASSESSMENT REPORT (PEAR)**

<sup>1</sup> <i>Auditing Company Name</i>	<b>Process Effectiveness Assessment Report</b>		<sup>2</sup> <i>Auditing Company Logo</i>
<sup>3</sup> <b>Organization:</b>		<sup>4</sup> <b>Site:</b>	<sup>4</sup> <b>OIN:</b>
<sup>5</sup> <b>PEAR Number:</b>	<sup>6</sup> <b>Audit Report Number:</b>	<sup>7</sup> <b>Issue Date:</b>	
<sup>8</sup> <b>Process Name:</b>			
<sup>9</sup> <b>Process details, including associated process interfaces:</b>			
<sup>10</sup> <b>Applicable 9100/9110/9120 clause(s):</b>			
<sup>11</sup> <b>Organization’s method for determining process effectiveness:</b>			
<sup>12</sup> <b>Auditor observations and comments supporting process effectiveness determination:</b>			
<sup>13</sup> <b>Statement of Effectiveness Level:</b> The audited process is: <input type="checkbox"/> 1. Not implemented; planned results are not achieved. <input type="checkbox"/> 2. Implemented; planned results are not achieved and appropriate actions not taken. <input type="checkbox"/> 3. Implemented; planned results are not achieved, but appropriate actions being taken. <input type="checkbox"/> 4. Implemented; planned results are achieved.			
<sup>14</sup> <b>Auditor Name(s):</b>		<sup>15</sup> <b>Auditee Representative Acknowledgement Name:</b>	
<sup>14</sup> <b>Signature(s):</b>		<sup>15</sup> <b>Signature(s):</b>	

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### FORM INSTRUCTIONS

#### APPENDIX C – PROCESS EFFECTIVENESS ASSESSMENT REPORT (PEAR)

General rules for use/application of PEAR:

- At a minimum, the results for each audited product realization process, as determined by the organization (reference 9100-series clauses 4.1 and 7.1), shall be recorded on a PEAR.
- Each assessed process shall be recorded on a separate PEAR.

1	Include the name of the organization conducting the audit.
2	Include the logo of the organization conducting the audit (optional).
3	Identify name of organization audited.
4	Identify location of the audited organization as noted, or to be noted, on the certificate or approval. Add OASIS Identification Number (OIN), if already identified.
5	Identify unique PEAR number, for reference purposes.
6	Identify audit report number associated to the PEAR.
7	Indicate the date that the PEAR was issued to the audited organization.
8	Identify the process assessed; indicate the name of the process, as defined by the organization.
9	Summarize the process activities, inputs, and outputs; including the identification of associated process interfaces.
10	Identify the applicable primary 9100/9110/9120 clause(s) for this process.
11	Describe the method used by the organization to determine process effectiveness [e.g., identification of Key Performance Indicators (KPIs) and associated targets, process capability data].
12	Annotate relevant objective evidence, observed conditions, data, information, comments, etc. to support the auditor's statement of effectiveness or ineffectiveness, as indicated in Block #13.
13	<p>Indicate to what extent the audited process was determined effective.</p> <p>Effectiveness: extent to which planned activities are realized and planned results achieved (reference ISO 9000).</p> <p>NOTE 1: A major (ma) NCR <u>shall</u> be issued when the effectiveness level of the process is rated a "1".</p> <p>NOTE 2: A major (ma) or minor (mi) NCR <u>shall</u> be issued when the effectiveness level of the process is rated a "2".</p>
14	<p>Name and signature of the auditor(s) who assessed the process and completed the PEAR.</p> <p>NOTE: Electronic signature may be used; in this case the following text can be added: 'signature on file' or 'electronic signature available', or similar.</p>
15	<p>The name and signature of the auditee representative (e.g., the process owner or Management Representative) for acknowledgement.</p> <p>NOTE: Electronic signature may be used; in this case the following text can be added: 'signature on file' or 'electronic signature available', or similar.</p>

APPENDIX D: QMS PROCESS MATRIX REPORT

<sup>1</sup> Auditing Company Name	<h2 style="margin: 0;">QMS Process Matrix Report</h2>										<sup>2</sup> Auditing Company Logo	
<sup>3</sup> Organization:							<sup>5</sup> Audit Report Number:					
<sup>4</sup> Site/OIN:							<sup>6</sup> Issue Date:					
<sup>7</sup> Standard: 9100 <input type="checkbox"/> /9110 <input type="checkbox"/> /9120 <input type="checkbox"/>												
			<b>COMPANY QMS PROCESSES</b>									
			1	2	3	4	5	6	7	9	9	10
<sup>8</sup> Process Name												
<sup>9</sup> Related Process Effectiveness Assessment Record (PEAR ID)												

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Clauses	<sup>10</sup> Conformity										<sup>11</sup> NCR Number
	1	2	3	4	5	6	7	8	9	10	
4.1 General requirements											
4.2.1 Documentation requirements – General											
4.2.2 Quality manual											
4.2.3 Control of documents											
4.2.4 Control of records											
5.1 Management commitment											
5.2 Customer focus											
5.3 Quality policy											
5.4.1 Quality objectives											
5.4.2 QMS planning											
5.4.3 Safety objectives <b>(9110 only)</b>											
5.5.1 Responsibility and authority <b>(including 5.5.1.1-2 for 9110 only)</b>											
5.5.2 Management representative											
5.5.3 Internal communication											
5.6 <u>Management review</u>											
5.6.1 General											
5.6.2 Review input											
5.6.3 Review output											
5.7 Safety policy <b>(9110 only)</b>											
6.1 Provision of resources											
6.2.1 Human resources – General											
6.2.2 Competence, training and awareness											
6.3 Infrastructure											
6.4 Work environment											
7.1 Planning of product realization											
7.1.1 Project management											
7.1.2 Risk management											
7.1.3* Configuration management											
7.1.4* Control of work transfers											
7.2.1 Determination of requirements related to the product											

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	1	2	3	4	5	6	7	8	9	10	
7.2.2											
7.2.3											
7.3.1											
7.3.2											
7.3.3											
7.3.4											
7.3.5											
7.3.6											
7.3.7											
7.4.1											
7.4.2											
7.4.3											
7.5.1											
7.5.2*											
7.5.3											
7.5.4											
7.5.5											
7.6											
8.1											
8.2.1											
8.2.2											
8.2.3											
8.2.4											
8.3											
8.4											
8.5											
8.5.1											
8.5.2											
8.5.3											
<b>Auditor Name(s):</b>							<b>Signature(s)</b>				

\* Not applicable for 9120

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<p><b>FORM INSTRUCTIONS</b></p> <p><b>APPENDIX D – QMS PROCESS MATRIX RECORD</b></p>	
<p>For each site audited, the QMS Process Matrix shall be completed to identify which processes and quality management system clauses have been audited.</p> <p>NOTE 1: This form can also be used to document the audit program for a full certification cycle and the audit plans for each audit (e.g., stage 2, surveillance, recertification).</p> <p>NOTE 2: The standard is structured as indicated in the left hand vertical column; the organization identifies their processes and provides the listing to the audit team leader. These processes shall be listed at the top of the form. The auditor team leader with the organization's assistance identifies the interrelationships between the standard's clauses and organization's processes (e.g., organization has a design process and clause 7.3 is associated to this process). In some cases, the organization's process may have the same name as the clause of the standard (e.g., Purchasing).</p>	
1	Include the name of the organization conducting the audit.
2	Include the logo of the organization conducting the audit (optional).
3	Identify the name of organization audited as noted, or to be noted, on the certificate or approval.
4	Identify the name of the site/location of the organization audited.
5	Identify associated audit/audit report number.
6	Indicate the date that this form was completed.
7	Tick box(es) (✓) of the applicable standard(s) (i.e., 9100, 9110, 9120).
8	<p>Identify the organization's processes, sub-processes, and value added activities, as defined by the audited organization. Identify the name of the associated area(s) involved, if appropriate.</p> <p>NOTE 1: For a site, it is possible that not all organization processes are applicable and/or performed at this location. In this situation, list the applicable processes or activities within a specific process performed at this site/location.</p> <p>Examples of processes/sub-processes/value added activities:</p> <p><u>Product Realization:</u></p> <p>Manufacturing – Machining            Manufacturing – Painting            Manufacturing – Assembly            Purchasing            Design</p> <ul style="list-style-type: none"> <li>• Design/Avionics Dept.</li> <li>• Design/Door Actuators Dept.</li> </ul> <p>NOTE 2: If there are more processes than columns, additional forms can be used.</p>
9	<p>Identify the PEAR ID as completed for the process indicated in block 8.</p> <p>NOTE: At a minimum, for each audited product realization process a PEAR must be completed.</p>
10	<p>For each process, indicate the applicable 9100/9110/9120 clause(s) as follows:</p> <ul style="list-style-type: none"> <li>• Record a '<b>C</b>' to denote a clause found <b>Conforming</b>.</li> <li>• Record an '<b>N</b>' to denote a clause found <b>Nonconforming</b>.</li> </ul> <p>NOTE: For clauses not applicable or not evaluated the appropriate box remains empty.</p>
11	Identify the NCR number as reference and " <b>Ma</b> " for major or " <b>Mi</b> " for minor [e.g., <b>NCR #01 (Ma)</b> ].



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**APPENDIX E – AUDIT REPORT (STAGE 2, SURVEILLANCE, RECERTIFICATION/APPROVAL AND SPECIAL)**

<sup>1</sup> Auditing Company Name		<b>AUDIT REPORT</b>						<sup>2</sup> Auditing Company Logo
<sup>3</sup> Audit Type (✓):	Stage 2 <input type="checkbox"/>	Surveillance <input type="checkbox"/>	Recertification / Approval <input type="checkbox"/>	Special <input type="checkbox"/>				
<sup>4</sup> Audit Date(s):		<sup>5</sup> Audit Duration (Man-days)	On-site:	Off-site:	<sup>6</sup> Report No.:	<sup>6</sup> Report Date:		
<b>Organization</b>								
<sup>7</sup> Company Name:				<b>8 Contact Details</b>				
Address:				Telephone:				
				Facsimile:				
Subsidiary of:				E-mail:				
				Representative:				
Website:				Title:				
<sup>9</sup> Audited location(s)/sites/OIN:								
<sup>10</sup> Audit Objectives:								
<sup>11</sup> Audit Scope:								
<sup>12</sup> Permitted Exclusions:								
<sup>13</sup> Certificate/Approval Number:				<sup>14</sup> Expiration Date:				
<b>Audit Team</b>								
<sup>15</sup> Audit Team Leader:								
<sup>16</sup> Audit Team Members:								
<sup>17</sup> Observers/Translators:								
<b>Audit Criterion</b>								
<sup>18</sup> Standards (✓):		9100 <input type="checkbox"/>	9110 <input type="checkbox"/>	9120 <input type="checkbox"/>	<sup>19</sup> Version:			
<sup>20</sup> Quality Manual:						<sup>21</sup> Revision:		
<b>Nonconformity</b>								
<sup>22</sup> Total Number of Nonconformities (issued during the audit):								
<sup>23</sup> Major Nonconformities:				<sup>24</sup> Minor Nonconformities:				
<b>PEAR</b>								
<sup>25</sup> Total Number of PEARs (issued during the audit):								
<sup>26</sup> Level 1:		Level 2:		Level 3:		Level 4:		
<b>Report Issue</b>								
<sup>27</sup> Audit Team Leader Name:								
<sup>28</sup> Auditing Company:								
<sup>29</sup> Audited Organization Representative:								
<sup>30</sup> Report Distribution:								

**AUDIT CONCLUSIONS**

<sup>31</sup> **Audit Summary:**

<sup>32</sup> **Key Issues/Concerns Requiring Top Management Attention:**

<sup>33</sup> **Strengths and Good Practices:**

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<sup>34</sup> <b>Opportunities for Improvement/Observations:</b>

<sup>35</sup> <b>Previous Surveillance Audit Nonconformity Status:</b>		
<b>NCRs Issued (during last audit):</b>	<b>NCRs Closed</b>	<b>NCRs Open</b>

<sup>36</sup> <b>Comments to NCR status</b>

<sup>37</sup> <b>Changes to Organization/Facilities/Quality Management System/Scope (since last visit):</b>			
Ref. No.:	Brief Description:	(As applicable)	
		Organization Document Ref.	9100/9110/9120 Clause Ref.

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<sup>38</sup> **Agreed Follow Up Arrangements:**

=

<sup>39</sup> **Audit Team Leader Recommendations:**

The organization:

is ready for granting certification/approval (initial certification).

is to maintain certification (in case of surveillance and special audit).

does not conform, a review is needed by the CB to determine whether certification can be maintained (surveillance).

shall close out all nonconformities before CBs certification decision can be made.

is ready for granting certification/recertification after NCRs closing out verification.

If none of above enter reason(s):

**Organization Confirmation**

<sup>40</sup> Upon mutual agreement with customers/potential customers, the organization will make available all results of this audit, including the report, findings, corrective actions, checklists, auditor notes, etc.:

<b>Auditee Representative Name:</b>		<b>Signature:</b>		<b>Date:</b>
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<sup>41</sup> **Audit Team Leader Approval**

<b>Name:</b>	
<b>Signature:</b>	
<b>Date:</b>	

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**FORM INSTRUCTIONS**

**APPENDIX E – AUDIT REPORT (STAGE 2, SURVEILLANCE, RECERTIFICATION/APPROVAL, SPECIAL)**

NOTE: This form can be used to report results of 2<sup>nd</sup> party supplier audits and 3<sup>rd</sup> party certification audits. 'Approval' is used to indicate 2<sup>nd</sup> party audits, certification/recertification is used to indicate 3<sup>rd</sup> party certification audits.

<b>Ref #</b>	<b>Description</b>
1	Include the name of the organization conducting the audit.
2	Include the logo of the organization conducting the audit (optional).
3	Identify the type of audit by checking (✓) the appropriate box (i.e., Stage 2, Surveillance, Recertification, Approval).
4	Identify the audit date(s). If more than one day, include the audit start and finish dates.
5	Identify the number of audit man-days; include offsite (e.g., preparation, planning, report writing/distribution) and on-site man-days.
6	Identify the audit report number and the date that the audit report was created.
7	Include general information on the organization being audited (i.e., company name, address, website address) and if part of a larger organization, enter information regarding the parent company in the 'Subsidiary of' field.
8	Include contact details of the organization being audited [i.e., telephone number, facsimile number, e-mail address, name and title of the organization representative (point of contact)].
9	Enter details of the location(s), sites, and OASIS Identification Number (OIN) of the organization that was audited.
10	Include a statement regarding the audit objectives, as applicable (e.g., determination of the conformity of the clients quality management system with audit criteria; evaluation of the capability of the quality management system to ensure compliance with statutory; regulatory, and contract requirements; evaluation of the effectiveness of the quality management system in meeting specified objectives; identification of areas for potential improvement of the quality management system).
11	Identify the audit scope; to include the extent and boundaries of the audit (e.g., physical locations, organization units, activities/processes to be audited). This can be different from the scope of certification or approval.
12	Enter information on the clauses of the applicable standards (i.e., 9100, 9110, 9120) that are excluded from the quality management system; must be appropriate and limited to clauses within clause 7.
13	Enter the reference number of the certificate (certification audit) or approval (2 <sup>nd</sup> party audit), if applicable at the time the report is issued.
14	Enter the expiry date of the certificate/approval, as applicable.
15	Identify the name of the audit team leader.
16	Identify the name(s) of the audit team members.
17	Include the name(s) of any observers [those who accompany the audit team, but do not act as part of it (e.g., witnesses, trainees)] and appointed translators who acted as an interface to support differing languages between the auditor(s) and organization representative(s).
18	Identify the standards used for determining the audit criteria by checking (✓) the appropriate box(es) (i.e., 9100, 9110, 9120).
19	Identify the issue of the relevant 9100, 9110, and/or 9120 standard (e.g., by index, date, number).

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<b>FORM INSTRUCTIONS (cont.)</b>	
<b>APPENDIX E – AUDIT REPORT (STAGE 2, SURVEILLANCE, RECERTIFICATION/APPROVAL, SPECIAL)</b>	
<b>Ref #</b>	<b>Description</b>
20	Identify the organization's Quality Manual.
21	Include the revision number and/or date of the organization's Quality Manual.
22	State the total number of nonconformities (NCRs) issued during the audit; this should equal the sum of the major and minor NCRs.
23	State the number of major NCRs issued during the audit.
24	State the number of minor NCRs issued during the audit.
25	State the total number of PEARs issued during the audit.
26	State the number of PEARs issued for each level of effectiveness.
27	Identify the name of the audit team leader.
28	Identify the name of the organization conducting the audit.
29	Identify the name of the audited organization representative.
30	Identify the names of those individuals who should receive a copy of the audit report, as agreed with the audited organization representative.
31	Provide a summary of the audit results, including for example comments related to: <ul style="list-style-type: none"> <li>• the effectiveness of the quality management system to enhance customer satisfaction.</li> <li>• the ability of the organization to constantly provide product that meets customer and applicable regulatory requirements.</li> <li>• the ability of the organizations quality management system to continually improve its effectiveness.</li> </ul>
32	Summarize the key issues/concerns from the audit that require top management attention. NOTE: Use brief and appropriate text to highlight the key issues/concerns (e.g., major nonconformities, ineffective processes).
33	Summarize areas of strength and good practices. NOTE: This is not merely identifying those areas of conformity with criteria, but an opportunity for the audit team leader to identify those processes that are particularly well controlled and effective, and/or can represent good practices. Visibility of these items could potentially benefit the organization, if shared and deployed, as appropriate, elsewhere within the organization.
34	Summarize opportunities for improvement and/or observations (e.g., if not addressed could lead to a nonconformity). Provide a brief description/summary to clarify recommendation.
35	State the total number of NCRs issued at the previous audit, if applicable, together with a breakdown of the numbers of NCRs closed and/or remaining open (in case of surveillance).
36	Include comments relating to the status of previously issued NCRs, if applicable, by referring to the NCR number plus an indicator of closed/open. For open NCRs, further text should provide a clear indication as to the reason for remaining open.  NOTE: The audit team leader should include a statement on any open NCRs in box 30 (Key Issues/Concerns Requiring Management Attention).
37	Include information on significant changes since the last visit (e.g., key changes to the organization and/or facilities, changes to the quality management system, changes to the scope of certification). In the case of changes to the organization's quality management system, indicate the applicable clause(s) of the 9100/9110/9120 standard and identify the organization's associated documentation.

**FORM INSTRUCTIONS (cont.)****APPENDIX E – AUDIT REPORT (STAGE 2, SURVEILLANCE, RECERTIFICATION/APPROVAL, SPECIAL)**

<b>Ref #</b>	<b>Description</b>
38	Summarize the arrangements agreed upon between the audit team leader and organization's representative relating to planned audit follow-up, as applicable (e.g., containment, corrective action and NCR closure, plus any other activities associated to audit close out).
39	The audit team leader shall tick (✓) the appropriate box relating to the recommendation for certification/approval status.  NOTE: Nonconformity closure is required prior to a certification/recertification decision (reference 9104). Closure shall be recorded by the audit team leader on the NCR(s).
40	Get organization's representative agreement that results of the audit, including the audit report, findings, corrective actions, PEARs, etc., shall be made available by the organization for customer/potential customer review upon mutual agreement with the customer/potential customer.
41	Identify the name of the audit team leader, including the signature and date to record final approval of the report.  NOTE: Electronic signature may be used; in this case the following text can be added: 'signature on file' or 'electronic signature available', or similar.

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**APPENDIX F – AUDIT REPORT (STAGE 1)**

<sup>1</sup> Auditing Company Name		<b>AUDIT REPORT (STAGE 1)</b>				<sup>2</sup> Auditing Company Logo
<sup>3</sup> Audit Date(s):		<sup>4</sup> Audit Duration (Auditor days):		<sup>5</sup> Report No:		
				<sup>6</sup> Report Date:		

**Organization**

<sup>6</sup> Company Name:		<sup>7</sup> Contact Details	
Address:		Telephone:	
		Facsimile:	
Subsidiary of:		E-mail:	
		Representative:	
Website:		Title:	
<sup>8</sup> Location(s)/Sites Visited:			
<sup>9</sup> Preferred Language for Stage 2:		<sup>10</sup> Interpreter Needed? (Yes/No):	
<sup>11</sup> Proposed Certification/Approval Scope:			
<sup>12</sup> Permitted Exclusions: (clauses):			

<sup>13</sup> Audit Team Leader:	
----------------------------------	--

**Audit Criterion**

<sup>14</sup> Standards (✓):	9100	<input type="checkbox"/>	9110	<input type="checkbox"/>	9120	<input type="checkbox"/>	<sup>15</sup> Version:	
<sup>16</sup> Quality Manual:						<sup>17</sup> Revision:		

Business	<sup>18</sup> Organization Revenue		<sup>19</sup> Personnel Numbers		<sup>20</sup> Organization Shift Patterns
	Revenue (optional)	% of Total Revenue	F/P/T*	% of Total Workforce	Number of Employees E/D/L/N**
Aviation					
Space					
Defense					
Other					

\*F=Full time, P=Part Time, T= Temporary    \*\*E= Early Shift, D=Day Shift, L=Late Shift, N=Night Shift

<sup>21</sup> List of Major Current(C)/Potential(P) Aviation, Space, and Defense Major Customers			
Customer	Address	Contact	% of Business



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<b><sup>22</sup> High Level Requirements Confirmation:</b> (S=Satisfactory, U= Unsatisfactory)				
<b>Requirement</b>	<b>Reference:</b>	<b>S(✓)</b>	<b>U(✓)</b>	<b>Comments:</b>
Evidence of a <b>documented procedure</b> covering control of documents (4.2.3).				
Evidence of a <b>documented procedure</b> covering control of records (4.2.4).				
Evidence of a <b>documented procedure</b> covering internal audit (8.2.2).				
Evidence and applicability of a quality manual (4.2.2).				
Evidence of interaction between processes of the QMS (on-site or remote)(4.2.2 c).				
Evidence that all the requirements of 9100-series standards are addressed by the organization's processes.				
Evidence of the description and sequence of processes (4.1).				
Evidence of a <b>documented procedure</b> covering control of nonconforming product (8.3).				
Evidence of a <b>documented procedure</b> covering corrective action (8.5.2).				
Evidence of a <b>documented procedure</b> covering preventive action (8.5.3).				
Evidence of the description of process interaction (4.1).				
Evidence of the identification of outsourced processes.				
Evidence of management review planning and results from previous twelve months.				
Evidence of internal audit planning and results of all processes/procedures of the QMS.				
<b><sup>23</sup> Comments</b> <i>(summary of above, if unsatisfactory)</i>				

<b><sup>24</sup> Key Customer Performance:</b>				
Customer	Trend of Quality Performance – Summary previous 12 months		Trend of On time Delivery Performance Summary previous 12 months	
	Satisfactory (✓)	Unsatisfactory (✓)	Satisfactory (✓)	Unsatisfactory (✓)
<b><sup>25</sup> Comments</b> <i>(collective summary of above trends, plus any other customer performance information gathered):</i>				

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<sup>26</sup> Customer Quality Management System Approval Status:	
Customer	Approval Status

<sup>27</sup> Additional Aviation, Space, and Defense Customer Quality Management System Requirements:		
Customer:	Description of Additional Requirement:	Document Reference:

<sup>28</sup> Comments:

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<sup>29</sup> <b>Key Information</b> (specific information obtained from the organization, including summary comments)	
<b>Processes/activities/subjects</b>	<b>Comments</b>
Process Mapping	
High Risk Processes/Products	
Risk Management	
Special Processes (e.g., metal joining, coating, thermal processing, bonding, chemical treatment)	
Regulatory Requirements/Authority Approval/Recognitions	
Configuration Management	
Project/Program Management	
Continual Improvement Activities	
Special Requirements/Critical Items (including Key Characteristics)	
First Article Inspection (e.g., 9102)	
Foreign Object Debris/Damage (FOD) Programs	
Special Work Environment [e.g., Electrostatic Discharge Sensitive (ESDS), clean room, temperature/humidity controls]	
Customer Presence in Organization (e.g., on-site representatives, regular meetings, reason)	
Restricted Areas/Proprietary Information/Confidentiality	
Export Limitations/Controls	
Customer Delegated Inspection	
Nonconforming Product Management [e.g., delegated Materials Review Board (MRB)]	
Evaluation of multiple site applicability	
Customer satisfaction and complaints status	
Customer authorized direct ship/direct delivery.	

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<sup>30</sup> <b>Areas of Concern:</b>

<b>Audit Team Leader Recommendations :</b>	
<sup>31</sup> The organization is ready to proceed with the Stage 2 audit:	Yes/No
<sup>32</sup> If no, enter reason(s):	
<sup>33</sup> Has the organization been requested to submit a corrective action plan prior to the Stage 2 audit?	Yes/No
<sup>34</sup> Proposed Stage 2 auditor-days required:	
<sup>35</sup> Proposed date(s) of the Stage 2 audit	
<sup>36</sup> Composition/competency of the audit team for the Stage 2 audit should include the following:	

<b>Organization Confirmation</b>				
<sup>37</sup> Upon mutual agreement with customers/potential customers, the organization will make available all results of this audit including the report, findings, checklists, auditor notes, etc.				
<b>Auditee Representative Name:</b>		<b>Signature:</b>		<b>Date:</b>
<sup>38</sup> <b>Audit Team Leader Name:</b>		<b>Signature:</b>		<b>Date:</b>
<sup>39</sup> <b>Auditing Organization:</b>				
<sup>40</sup> <b>Organization Representative:</b>				
<sup>41</sup> <b>Report Distribution:</b>				

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<b>FORM INSTRUCTIONS</b>	
<b>APPENDIX F – AUDIT REPORT (STAGE 1)</b>	
<b>Ref #</b>	<b>Description</b>
1	Include the name of the organization conducting the audit.
2	Include the logo of the organization conducting the audit (optional).
3	Identify the audit date(s). If more than one day, include the audit start and finish dates.
4	Identify the number of audit man-days for the Stage 1 audit.
5	Identify the date that the audit report was created.
6	Include general information of the organization being audited (i.e., company name, address, website) and if part of a larger organization, enter information regarding the parent company in the 'Subsidiary of' field.
7	Include contact details of the organization being audited [i.e., telephone number, facsimile number, e-mail address, name and title of the organization representative (point of contact)].
8	Enter details of the location(s)/sites of the organization that were visited for the Stage 1 audit.
9	Enter information regarding the preferred language for the Stage 2 audit.
10	Indicate Yes/No, if an interpreter is needed.
11	Identify the audit scope; to include the extent and boundaries of the audit (e.g., physical locations, organization units, activities/processes to be audited).
12	Enter information on the clauses from the applicable standards (i.e., 9100/9110/9120) that are permitted to be excluded from the quality management system; must be appropriate and limited to clause 7.
13	Identify the name of the audit team leader.
14	Identify the standards used for determining the audit criteria by checking (✓) the appropriate box(es) (i.e., 9100, 9110, 9120).
15	Include the revision level of the relevant 9100, 9110, and/or 9120 standard (e.g., AS9100C, EN9100:2009).
16	Identify the organization's quality manual.
17	Include the revision number and/or date of the organization's quality manual.
18	Include information regarding the organization's revenue ( <u>optional</u> ) relating to aviation, space, defense, and other business, including the percentage of total revenue.
19	Include information on the number of full time, part time, and temporary employees associated to aviation, space, defense, and other business, including the percentage of the total workforce.
20	Include information on the number of employees and associated shift patterns relating to aviation, space, defense, and other business.
21	List and specify all major (e.g., top 5) current (C) and potential (P) aviation, space, defense, and/or other customers requiring 9100-series standard compliance, including an indication of how much business each customer represents in percentage terms of their overall business. Omit details, if confidentiality agreements forbid.
22	Include information relating to a high-level requirements review and evaluation of processes and procedures; record if the processes are satisfactory or unsatisfactory, and identify related references and provide comments, as appropriate.
23	Include general comments relating to the high-level requirements review and evaluation, including a summary for items determined to be 'unsatisfactory'.

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<b>Form Instructions (cont.)</b>	
<b>AUDIT REPORT (STAGE 1)</b>	
24	Review performance data for each key customer; primary focus is on the quality and On-time Delivery (OTD) performance trends for the previous 12 months. Sources of information can include: customer satisfaction data, complaint summaries, customer reports, scorecards, key performance indicators (e.g., escapes, rejections, complaints, defectives). Summarize results and indicate whether performance is satisfactory or unsatisfactory.
25	Include general comments/collective summary, in addition to any other applicable customer performance information gathered.
26	List information regarding any customer special approval status that is declared (e.g., limited, probation, suspension, withdrawal).
27	Include information regarding any additional aviation, space, and defense customer quality management system requirements, including a description and document reference.
28	Include general comments relating to additional aviation, space, and defense customer quality management system requirements, as applicable.
29	Obtain the necessary information and documentation required to review readiness for each of the key processes/activities/subjects listed; evaluate processes and record results/comments. NOTE: If additional key processes are identified, document the processes and associated results/comments.
30	State any areas of concern that could be classified as a nonconformity, if not resolved before the Stage 2 audit.
31	Recommend if the organization is ready to proceed with the Stage 2 audit by indicating 'Yes' or 'No'.
32	If recommendation is to not proceed with the Stage 2 audit, document the reason(s).
33	Identify 'Yes' or 'No' to indicate if the organization has been requested to submit a corrective action plan prior to the Stage 2 audit.
34	Calculate and enter the number of audit man-days for the proposed Stage 2 audit.
35	Enter proposed date(s) of the Stage 2 audit. NOTE: Recognize the elapsed time should normally be between six weeks and three months from the date(s) of the Stage 1 audit.
36	Specify the composition/competency of the audit team for the Stage 2 audit, including identification of any technical experts or translators that may be needed.
37	Get organization's representative agreement that the audit report will be made available for customer/potential customer review, as required.
38	Identify the name and signature of the audit team leader. NOTE: Electronic signature may be used; in this case the following text can be added: 'signature on file' or 'electronic signature available', or similar.
39	Identify the name of the organization that conducted the audit.
40	Identify the name of the organization's representative (auditee).
41	Identify the names of those individuals who should receive a copy of the audit report, as agreed upon with the organization's representative.

**APPENDIX G: SUPPLEMENTAL AUDIT REPORT**

<sup>1</sup> Auditing Company Name	<b>SUPPLEMENTAL AUDIT REPORT</b>	<sup>2</sup> Auditing Company Logo
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<sup>3</sup> Audit Type (✓):	Stage 2	<input type="checkbox"/>	Surveillance	<input type="checkbox"/>	Recertification / Approval	<input type="checkbox"/>	Special	<input type="checkbox"/>
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<sup>4</sup> Audit Date(s):		<sup>5</sup> Audit Duration (Auditor-days)	On-site: Off-site:	<sup>6</sup> Report No.:	<sup>6</sup> Report Date :
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<sup>7</sup> Audit Team Member(s):

<sup>8</sup> Organization:

Audited Site/OIN/Areas /Departments:

<sup>10</sup> Organization staff interviewed during the audit:

Name	Position

<sup>11</sup> Summary of site activities and processes:

<sup>12</sup> Number of Nonconformities linked with this report      Total/MA/mi:      /      /

<sup>13</sup> Number of PEARs linked with this report      Level 1/2/3/4:      /      /      /

<sup>14</sup> Auditor Notes:
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<sup>15</sup> Opportunities for Improvement:
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<sup>16</sup> Strengths and Good Practices:
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<sup>17</sup> Auditor Name:	<sup>17</sup> Auditor Signature:
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**FORM INSTRUCTIONS**

**APPENDIX G – SUPPLEMENTAL AUDIT REPORT**

This form can be used to provide detailed audit results on an individual site, if the audit report (Appendix E) does not include audit details for this site.

<b>Ref #</b>	<b>Description</b>
1	Include the name of the organization conducting the audit.
2	Include the logo of the organization conducting the audit (optional).
3	Identify the type of audit by checking (✓) the appropriate box (i.e., Stage 2, Surveillance, Recertification, Approval).
4	Identify the audit date(s). If more than one day, include the audit start and finish dates.
5	Identify the number of auditor days; include offsite (e.g., preparation, planning, report writing/distribution) and on-site days.
6	Identify the audit report number and the date that the audit report was created.
7	Identify the auditor's name.
8	Identify the organization being audited.
9	Identify the locations, OASIS Identification Number (OIN), areas, and departments of the organization that the audit team member audited.
10	List names and positions of personnel that were interviewed.
11	Provide a summary of activities and processes reviewed.
12	Provide information that might be useful for the audit team leader, or background information that needs to be retained for future (surveillance) audits.
13	Identify the number of nonconformities documented for this supplemental audit linked with this audited site/areas/departments: Total/MA/mi (e.g., 3/2/1).
14	Identify the number of PEAR forms per level class, documented for this supplemental audit linked with this audited site/areas/departments: level 1/2/3/4(e.g., 1/2/1/2).
15	Summarize any opportunities for improvement identified; provide a brief description/summary to clarify the recommendation.
16	Summarize any areas of strength/good practices.  NOTE: This is not just merely identifying those areas of conformity, but an opportunity for the auditor to identify those processes that are particularly well controlled and effective, and/or represent good practices. Visibility of these items could potentially benefit the organization, if shared and deployed, as appropriate, elsewhere within the organization.
17	Name and signature of the auditor.  NOTE: Electronic signature may be used; in this case the following text can be added: 'signature on file' or 'electronic signature available', or similar.