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Introduction

This draft standard is based on European discussions in which the UK has taken an active part. Your comments on this draft are welcome and will assist in the preparation of the consequent British Standard. Comment is particularly welcome on national, legislative or similar deviations that may be necessary.

Even if this draft standard is not approved by the UK, if it receives the necessary support in Europe, the UK will be obliged to publish the official English Language text unchanged as a British Standard and to withdraw any conflicting standard.

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Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	(7)
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/ Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

AEROSPACE STANDARD	9104-003	
	Issued 4 November 2014 <i>Proposed Draft</i> Superseding March 2007 Technically equivalent writings published in all IAQG sectors	
(R) Requirements for Aviation, Space, and Defense Auditor Training, Development, Competence, and Authentication		

RATIONALE

After the initial publication of the International Aerospace Quality Group (IAQG) 9104 standard 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:

- 9104-001 – Requirements for Aviation, Space, and Defense Quality Management System Certification Programs;
- 9104-002 – Requirements for Oversight of Aerospace Quality Management System Registration/Certification Programs; and
- 9104-003 – Requirements for Aviation, Space, and Defense Auditor Training, Development, Competence, and Authentication

This document is written to define a robust shared process to ensure conformance to established Aviation, Space, and Defense (ASD) industry 9104-series standards requirements. The purpose of this revision was to align with the respective 9104-001 and 9104-002 standards, and incorporate lessons learned from past activities.

FOREWORD

In December 1998, the ASD 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 ASD (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 ASD applications. These requirements are published simultaneously as AS/EN/JISQ 9100-series standards (i.e., 9100, 9110, 9120) by SAE International in the Americas, AeroSpace and Defense Industries Association of Europe - Standardization (ASD-STAN) in Europe, and Japanese Standards Association (JSA) and Society of Japanese Aerospace Companies (SJAC) in Asia/Pacific.

Another initiative of the IAQG was the development of a global scheme for the acceptance and recognition of audits performed by Certification Bodies (CBs), using the 9100-series standards, 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 3rd party audit certification scheme with specific ASD elements and requirements, under the guidance and oversight of the ASD industry; and
- the use of a harmonized approach with CBs for the purpose of improving the quality and process control throughout the entire supply chain.

Contained herein are requirements for ASD auditor training, development, competence, and authentication to satisfy the criteria defined in the 9104-001 standard in support of certification and recognition of AQMS standards. This document supplements the existing international requirements for the accreditation of CB personnel and auditor authentication programs.

Confidence and reliance in the audit process depends on the competence of those conducting the audits, making certification decisions, and supporting an audit program. Competence is based on the demonstration of personal attributes, and the ability to apply AQMS knowledge and skills gained through education, aviation and/or space work experience, auditor training, and audit experience. Knowledge and skills are only two elements of competence; therefore, organizations operating AQMS audit programs should establish and implement effective competence systems.

The IAQG has acknowledged and incorporated many fundamental International Organization for Standardization (ISO) document requirements and expectations (e.g., ISO 19011, ISO/IEC 17021) in support of auditor training, development, competence, and authentication processes. The IAQG requires personnel operating in a specific technical field to have competence for the functions they perform; these positions may be management, technical, administrative, etc. This means that an organization operating an aviation, space, or defense auditing program should have adequate personnel with required knowledge of industry processes, product, and system requirements to ensure their audit program is able to operate effectively and in accordance with ASD industry requirements.

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1. SCOPE

This document provides the minimum requirements for auditors and Training Providers (TPs) who participate in AQMS certification activities, under the IAQG ICOP scheme. It is applicable to auditors, TPs, Auditor Authentication Bodies (AABs), Training Provider Approval Bodies (TPABs), and Sector Management Structures (SMSs).

2. REFERENCES

Auditor accreditation programs and associated oversight assessments shall be based on the latest published versions of the following quality management systems standards, and industry guidance and mandatory documents, as applicable. 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
9104-001	Requirements for Aviation, Space, and Defense Quality Management System Certification Programs
9104-002	Requirements for Oversight of Aerospace Quality Management System Registration/Certification Programs

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

ISO 9000	Quality management systems – Fundamentals and vocabulary
ISO 9001	Quality management systems – Requirements
ISO/IEC 17000	Conformity assessment – Vocabulary and general principles
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 auditing management systems

3. TERMS AND DEFINITIONS

Definitions for general terms can be found in ISO 9000, ISO/IEC 17000, ISO 19011, 9104-001, and the IAQG International Dictionary (located on the IAQG website). An acronym log for this document is presented in Appendix A. For the purpose of this standard, the following definitions apply:

3.1 Aerospace

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

3.2 Aerospace Quality Management System (AQMS)

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

3.3 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 ASD organizations that has been authenticated in accordance with the requirements of this standard.

An AQMS auditor is authenticated in any one of three different grades [i.e., ASD Experienced Lead Auditor (AELA), ASD Lead Auditor (ALA), or ASD Auditor (AA)] in any one or combination of the following AQMS standards: 9100, 9110, and 9120.

3.4 Aviation and/or Space Work Experience

Full-time work experience in the aviation and/or space industry that is directly involved in engineering, design, manufacturing, supply chain management, quality or process control, maintenance, or overhaul.

3.5 Auditor Authentication

The output from confirming an auditor's competence has met or exceeded the minimum competency requirements for an AQMS auditor, as defined in this standard.

3.6 Auditor Authentication Body (AAB)

A body approved by the IAQG sector that has the primary responsibility for authenticating AQMS auditors, in accordance with defined requirements.

3.7 Auditor Recognition

The process of recognizing the authentication of an AQMS auditor by an AAB.

3.8 Certification Body (CB)

A body that performs audit and certification services, and is subject to accreditation with respect to AQMS standards and any supplementary documentation required

under the ICOP scheme.

3.9 Aerospace Quality Management System (AQMS) Auditor Competence

The ability to apply knowledge and skills gained through a combination of auditor training, AQMS standard training, ASD work experience, audit experience, and technical knowledge to achieve intended results.

3.10 Industry Controlled Other Party (ICOP)

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

3.11 International Aerospace Quality Group (IAQG)

A body of prime ASD Original Equipment Manufacturers (OEMs) chartered to develop common requirements and guidelines for use by the ASD industry for quality improvement.

3.12 International Aerospace Quality Group (IAQG) Sector or Sector

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

3.13 International Organization for Standardization (ISO) 9001 Lead Auditor Course

This training course is typically a four or five day course for quality management system auditors and lead auditors that includes the principles of quality management systems, ISO 9001 standard requirements, the process approach, and auditing requirements. These courses would not typically include internal auditor courses, executive summary courses, awareness courses, or auditor courses for other non-quality management systems.

3.14 Manufacturing Industry Company

An organization that is involved in the design, development, manufacturing, repair, or maintenance of products that are hard goods in any industry sector. A manufacturing industry company is not a service company or a company that only conducts software development activities.

3.15 Online Aerospace Supplier Information System (OASIS) Database

The web-based IAQG application containing information on participating National Aerospace Industry Associations (NAIAs), Accreditation Bodies (ABs), TPABs, AABs, accredited CBs, AQMS auditors, certified suppliers, and audits, which are approved and recognized by the SMS through the ICOP scheme.

3.16 Product [also referred to as Aviation, Space, and Defense (ASD) Product]

An aircraft, rotorcraft, guided weapon, launcher, spacecraft, other product designed to travel through the air, inside or outside the ground effect, or to travel outside the influence of the earth's atmosphere, or major components of these products (e.g., engines, major sub-systems, parts, appliances, equipment, materials).

3.17 Sector Management Structure (SMS)

The organization established in a sector that manages the application and oversight of the ICOP scheme as defined by this standard. Each sector may use a different name for this organization [i.e., Registration Management Committee (RMC) in the Americas and Asia/Pacific, European Aerospace Quality Group (EAQG) Other Party Management Team (OPMT) and national Certification Body Management Committees (CBMCs) in Europe].

3.18 Training Provider Approval Body (TPAB)

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

4. AEROSPACE QUALITY MANAGEMENT SYSTEM AUDITOR REQUIREMENTS

The following categories of auditors have been established:

- ASD Auditor (AA) 9100 and 9120.
- ASD Auditor (AA) 9110.
- ASD Lead Auditor (ALA) 9100 and 9120.
- ASD Lead Auditor (ALA) 9110.
- ASD Experienced Lead Auditor (AELA) 9100 and 9120.
- ASD Experienced Lead Auditor (AELA) 9110.

4.1 Auditor Authentication Requirements

The auditor authentication requirement for each category includes the knowledge and skill requirements specific to the particular AQMS. Auditors shall be authenticated independently in each AQMS standard and shall only conduct audits to that standard (e.g., 9100 authenticated auditors cannot perform audits to 9110); however, auditors may be authenticated for one or more AQMS standards.

4.2 ASD Experienced Lead Auditor Work Experience

To be authenticated as an AELA, the full-time aviation and/or space work experience shall have included at least five of the following specific aspects:

- Aviation or space quality assurance and/or quality control;

- Military or civil aviation, or space regulatory requirements;
- First Article Inspection (FAI);
- Airworthiness and safety requirements;
- Material traceability requirements;
- Sub-contractor approval and control;
- Variation management of key characteristics;
- Flow-down of requirements;
- Foreign Object Damage / Debris (FOD) prevention program;
- Use of customer supplied products;
- Calibration controls and positive recall system;
- Acceptance authority media;
- Nonconforming material management;
- Sampling inspection or testing;
- Statistical process control requirements and limitations;
- Special processes;
- Configuration management requirements and control;
- Manufacturing, maintenance, or overhaul techniques; or
- Design and development.

The full-time work experience shall be for a single organization for a given period. Working at more than one organization, at the same time, shall not be considered full-time.

5. AUDITOR AUTHENTICATION PROCESS

5.1 Aerospace Quality Management System Auditor Authentication

This standard defines the process for auditor authentication through the evaluation of acquired competence, work experience, and required training. The process for AQMS auditor authentication is as follows:

- Initial application.
- Authentication.

- Re-authentication.
- Advancement from one auditor authentication grade to another (e.g., AA to AELA), as applicable.

All forms required by this standard (see Appendices B and C) shall be controlled and maintained by the IAQG OPMT. The forms are intended to be used by the IAQG OPMT to define the auditing competence requirements for all AQMS auditors and technical competence requirements for ALA and AELA auditors. The forms shall be made available and reside on the IAQG Forms Management website. Any changes to these forms shall be reviewed and approved by the IAQG OPMT.

5.1.1 Competence Validation Process

- a. AQMS auditor competence shall be evaluated using the IAQG-sanctioned Competence Validation Process (CVP) that consists of two components:
 - validation of quality management system auditing competence, as defined in 9104-003 Form A (see Appendix B); and
 - validation of technical competence associated with auditing ASD industry quality management systems, as defined in 9104-003 Form B (see Appendix C).

The CVP shall be sanctioned by the IAQG and managed by the IAQG OPMT; this shall include the approval and ongoing maintenance of the CVP.

- b. An auditor shall only be allowed to complete the CVP once in a six-month period, regardless of the authentication activity.
- c. The results of the CVP shall include outlining identified strengths and weaknesses, and scoring for each competence evaluated; noting the percent and associated color rating. Competence scoring shall be as follows:
 - Result of < 80.0% (Red) – competence was not effectively demonstrated.
 - Result of 80.0 - 89.9% (Yellow) – adequate competence was demonstrated.
 - Result of > 89.9% (Green) – competence was effectively demonstrated.

5.1.2 Quality Management System Auditing Competence Validation

Each auditor authentication applicant shall undergo a validation of their quality management system auditing competence using the CVP. The validation of the quality management system auditing competence shall be in accordance with Appendix B, which is based on the following generic categories:

a. Types of Quality Audits

Define and differentiate various audit types (e.g., product, process, system, management compliance, 1st party, 2nd party, 3rd party, internal, external, desk, department, function).

b. Audit Criteria

Define and distinguish between various audit criteria (e.g., standards, contracts, specifications, policies) and quality awards criteria (e.g., Malcolm Baldrige).

c. Roles and Responsibilities of Audit Participants

Define and describe the functions and responsibilities of various audit participants (e.g., audit team members, lead auditor, client, auditee).

d. Ethical, Legal, and Professional Issues

1. Audit Credibility

Identify and apply ethical factors that influence audit credibility (e.g., auditor independence, objectivity, qualifications).

2. Liability Issues

Identify potential legal and financial ramifications of improper auditor actions (e.g., carelessness, negligence) in various situations and recognize the effect that certain audit results can have on an auditee's liability.

e. Audit Process

1. Elements of the Audit Planning Process

Identify and implement various steps in audit preparation and planning (e.g., verifying audit authority; determining the purpose, scope, type, requirements to audit against; identification of audit resources).

2. Auditor Selection

Identify and examine various auditor selection criteria (e.g., education, experience, industry background, subject matter expertise).

3. Audit-related Documentation

Identify the sources of pre-audit information and examine audit-related documentation (e.g., reference materials, prior audits results).

4. Logistics

Identify and organize various audit-related logistics (e.g., travel, security considerations, escorts).

5. Auditing Tools

Select, prepare, and use checklists, log sheets, sampling plans, and procedural guidelines in various audit situations.

6. Auditing Strategies

Identify and use various tactical methods for conducting an audit (e.g., forward and backward tracing, discovery).

7. Objective Evidence

Identify and differentiate various characteristics of objective evidence (e.g., observed, measured, verified, documented).

8. Audit Process Management

Define and apply elements of managing an audit, including coordinating team activities, re-allocating resources, adjusting the audit plan, and communicating with the auditee.

f. Auditor Characteristics

Identify characteristics that make auditors effective (e.g., interpersonal skills, problem-solving skills, attention to detail, cultural sensitivity, ability to work independently and in a group/team).

g. Team Membership, Leadership, and Facilitation

Define and use various techniques to support team-building efforts and to help maintain group focus, both as a participant and a team leader. Recognize and apply the classic stages of team development (i.e., forming, storming, norming, performing). Identify various team member roles and apply coaching, guidance, and other facilitation techniques necessary for effective team functioning.

h. Presentation Techniques

Define and apply various tools and techniques (e.g., graphs, charts, diagrams, multimedia aids for written/oral presentations made at opening/closing meetings).

i. Fundamental Quality Control Tools

Identify, interpret, and apply Pareto charts, cause and effect diagrams, flowcharts, control charts, check sheets, scatter diagrams, and histograms.

j. Quality Improvement Tools

Identify, interpret, and apply problem-solving tools [e.g., root cause analysis, five stages of six-sigma quality improvement and assurance – Design, Measure, Analyze, Improve, and Control (DMAIC), lean tools, Plan-Do-Check-Act (PDCA), Corrective and Preventive Action (CAPA) methods].

k. Descriptive Statistics

Identify, interpret, and use various measures of central tendency (e.g., mean, median, mode) and dispersion (e.g., standard deviation, frequency distribution).

1. Sampling Methods

Identify, interpret, and use various sampling methods (e.g., acceptance, random, stratified) and define related concepts (e.g., consumer and producer risk, confidence level).

2. Process Capability

Identify and interpret various process capability indices (e.g., Cp, Cpk).

3. Qualitative and Quantitative Analysis

Describe and distinguish between qualitative and quantitative analysis, and attribute and variable data.

4. Cost of Quality

Identify the basic Cost of Quality (COQ) principles and describe the four COQ categories (e.g., prevention, appraisal, internal failure, external failure).

NOTE: Additional competence criteria may be considered.

5.1.3 Technical Competence Validation

Each auditor authentication applicant shall undergo a validation of their technical competence using the CVP. The validation of technical competence shall be in accordance with Appendix C, which is based on the following categories:

a. Configuration Management / Change Control

Identify the principles of change control systems and configuration management as used in various ASD hardware, software, product, process, and service applications.

b. Risk Management

Identify risk management concepts and strategies (e.g., identifying risk tradeoffs, mitigation).

c. Interrelationships Between Business Processes

Understand major business processes (e.g., sales, marketing, engineering) and their interrelationships.

d. Design, Development, Qualification, Verification, and Validation

Define, distinguish between, and apply various methods of the design and development activities that result in the qualification (certification), verification, and validation of products and processes.

e. Regulatory Environment

Understand and comprehend the regulatory requirements from various ASD authorities [e.g., Federal Aviation Administration (FAA), European Aviation Safety

Agency (EASA), United States Department of Defense (DoD), North Atlantic Treaty Organization (NATO), National Aeronautic and Space Administration (NASA), European Space Agency (ESA)] and their application, within the quality management system, and effect on the delivered product and customer contractual arrangements.

5.2 Aerospace Quality Management System Auditor Initial Authentication Process

- a. The process diagram for the initial authentication of AQMS auditors is presented in Appendix D.
- b. Prior to applying for initial authentication as an AA, ALA, or AELA, applicants shall have performed the following:
 1. Complete an ISO 9001 Lead Auditor course. A Certificate of Completion (CoC) shall be provided as objective evidence. The ISO 9001 Lead Auditor course shall have been completed prior to application for authentication.

Where the ISO 9001 standard has been re-issued, a lead auditor course CoC for a superseded edition shall be acceptable provided CoCs for training covering the changes for any and all revisions of ISO 9001, including the latest edition, are also provided. A CoC for the superseded edition shall be acceptable up to six months after the re-issue date of the ISO 9001 standard.

2. Complete all required IAQG-sanctioned auditor training. A CoC for each course shall be provided as objective evidence.
3. Complete 20 on-site audit days, within the last 3 years, auditing quality management systems (ISO 9001 or ISO 9001-based standards). Applicant's audit log shall be provided as objective evidence of audit completion. Submitted audits shall not include any audits where the applicant was an observer, an auditor or assessor under training, a witness assessor, oversight witness assessor, or a witness assessor for a CB (or similar).

Where an assessor employed or contracted by an AB wants to become authenticated as an AQMS auditor, the requirements of this standard shall apply; however, AB assessors may use CB office assessments conducted against ISO/IEC 17021, ISO/IEC 17021 combined with 9104-001 standard requirements to satisfy quality management system, or AQMS audit experience for initial authentication. The assessments submitted shall only include assessments that demonstrate direct evaluation by the AB assessor of a CB, during office assessments.

4. Have objective evidence of at least two years aviation and/or space work experience (for AELA authentication) or in a manufacturing industry company (for AA or ALA authentication). The experience shall be directly related to performing work in support of the company's product realization processes (e.g., quality, engineering, design, manufacturing, process control, maintenance and overhaul).

- c. An auditor may only be authenticated through one AAB at any time; however, an auditor may choose any SMS approved AAB for authentication.
- d. Individuals shall apply for authentication to a SMS approved AAB providing the objective evidence outlined in section 5.2.b and any additional documentation required by the AAB.
- e. The AAB shall complete an initial review of the objective evidence provided to determine conformance to the initial authentication criteria. The AAB shall complete this review within 30 calendar days of receiving a completed application. Where a subsequent review is required, this shall also be completed within 30 calendar days of receipt. The AAB shall provide feedback to the applicant outlining any concerns with their application, after completion of the review(s).
- f. Once the AAB has validated the application satisfies the initial authentication criteria, the AAB shall provide the applicant with instructions for completing the initial CVP in order to proceed with the authentication process.
- g. The applicant shall complete the initial CVP within 90 calendar days of notification by the AAB. If the applicant completed the CVP within 90 calendar days, prior to the authentication application, the completed CVP results may be used for the initial application review and auditor grade determination.

NOTE: An auditor shall only be allowed to complete the CVP once in any six-month time period, regardless of the authentication activity.

- h. The results of the CVP shall be provided to the applicant within 30 calendar days of completion of the CVP.
- i. The applicant shall provide the AAB with the CVP results.
- j. The AAB shall use the CVP results to continue the authentication process as follows:
 - 1. Applicants that score yellow or green for all quality management system auditing competence criteria, but score red in technical competence criteria shall be authenticated as an AA.
 - 2. Applicants that score yellow or green for all quality management system auditing and technical competence criteria shall be authenticated as an ALA.
 - 3. Applicants that score yellow or green for all quality management system auditing and technical competence criteria, and have two years applicable aviation and/or space work experience (see section 4.2) shall be authenticated as an AEELA.
 - 4. Applicants that score red in any quality management system auditing competence criteria shall not be authenticated, but may reapply with the following limitations:

- The applicant must declare that they have executed and completed an improvement plan that addresses the weaknesses identified within the CVP report (i.e., yellow and red scores).
 - Applicants shall not submit more than two re-applications per AQMS standard authentication requested in any three-year period from the date of the initial application.
 - These applicants shall only be allowed to apply for AA status.
 - After obtaining AA status, these applicants may follow the advancement process (see section 5.4) to obtain ALA or AELA authentication.
- k. For auditors who successfully complete the CVP, initial auditor authentication duration shall be three years from date of AAB authentication decision.
- l. The AAB shall update the auditor's OASIS database record within five calendar days of the authentication decision.
- m. Authenticated auditors, with any yellow ratings, shall develop and execute an improvement plan to address weaknesses identified during their period of authentication.

5.3 Aerospace Quality Management System Auditor Re-authentication Process

- a. The process diagrams for the AQMS auditor re-authentication of AAs, ALAs, and AELAs are presented in Appendix E and F respectively.
- b. Auditors shall apply for re-authentication to a SMS approved AAB, 90 calendar days prior to expiration of their current authentication. If an auditor fails to apply prior to expiration of their authentication, the auditor shall be required to complete the initial auditor authentication process.
- c. The application for re-authentication shall include the following objective evidence:
1. Declaration that the auditor has executed and completed an improvement plan that addressed the weaknesses identified within the CVP report.
 2. An audit log providing objective evidence of a minimum of 20 on-site audit days auditing AQMS standards (i.e., 9100, 9110, 9120) within the last 3 years. An applicant's audit log shall be provided as objective evidence of audit completion.

Submitted audits shall not include any audits where the applicant was an observer, auditor or assessor under training, a witness assessor, an oversight witness assessor, or a witness assessor for a CB (or similar).

Where an assessor employed or contracted by an AB wants to become re-authenticated as an AQMS auditor, the requirements of this standard shall apply; however, AB assessors may use assessments conducted against

ISO/IEC 17021 combined with 9104-001 as audit experience for re-authentication. The assessments submitted shall only include assessments that demonstrate direct evaluation by the AB assessor of a CB, during office assessments.

3. Objective evidence of completion of continuing education requirements, including all OPMT mandatory training. A minimum of 60 hours of formal training must be earned during the 3-year authentication cycle, with a minimum of 10 hours per year. Formal training shall be evidenced with a CoC.

NOTE: 60 hours of contact training is equivalent to 6 Continuing Education Units (CEUs).

4. An ongoing auditor performance assessment, including any feedback received and associated improvement actions taken, was maintained during the authentication cycle. This evidence shall be endorsed by the applicant's Audit Program Manager (or equivalent individual) and shall be submitted with the applicant's audit log.
 5. Any additional AAB required objective evidence.
- d. The AAB shall complete an initial review (i.e., validation of objective evidence provided), including feedback of the objective evidence provided to determine conformance to the defined re-authentication criteria. The AAB shall complete this review and any additional reviews within 30 calendar days of application.
 - e. If the auditor qualifies for re-authentication, the AAB shall provide the applicant with instructions for completion of the CVP.
 - f. If not previously completed, the applicant shall complete the initial CVP within 90 calendar days of notification by the AAB. CVP results are valid for authentication for one year from the date of completion of the CVP. If the applicant completes the CVP within 90 calendar days, prior to re-authentication application, the CVP results may be used for the re-authentication application review and auditor grade determination.
- NOTE: An auditor shall only be allowed to complete the CVP once in any six-month time period, regardless of the authentication activity.
- g. Results from the CVP shall be provided to the applicant within 30 calendar days of completion of the CVP.
 - h. The applicant shall provide the AAB with the CVP results.
 - i. The AAB shall use the CVP feedback to continue the re-authentication process as follows:
 1. AA applicants that score yellow or green for all quality management system auditing competence criteria, but score red in technical competence criteria shall be re-authenticated as an AA.

2. AA applicants that score yellow or green for all quality management system auditing and technical competence criteria shall be authenticated as an ALA.
 3. AA applicants that score red in any quality management system auditing competence criteria shall only be re-authenticated for a period of 12 months. If this is the second re-authentication with a quality management system auditing competence criteria rating of red, the AQMS auditor shall be withdrawn for a minimum of 12 months and must reapply by starting over with the initial authentication process.
 4. ALA or AELA applicants that score green for all quality management system auditing and technical competence criteria shall be re-authenticated at their current grade for a period of five years.
 5. ALA or AELA applicants that score yellow or green for all quality management system auditing and technical competence criteria shall be re-authenticated at their current grade for a period of three years.
 6. ALA or AELA applicants that score yellow or green for all quality management system auditing competence criteria, and red for any technical competence criteria shall only be re-authenticated for a period of 12 months. If this is the second re-authentication with a technical competence criteria rating of red, they shall be graded as an AA with a three-year re-authentication cycle. They may choose to reapply as an ALA or AELA using the advancement process (see section 5.4).
 7. ALA or AELA applicants that score red in any quality management system competence criteria shall only be re-authenticated for a period of 12 months. If this is the second re-authentication with any quality management system auditing competence criteria rating of red, they shall be withdrawn for a minimum of 12 months and must reapply by starting over with the initial authentication process.
- j. Re-authentication duration shall not exceed three calendar years from date of AAB re-authentication decision, except as provided for ALAs and AELAs that achieve all green scores on their respective CVP.
- k. The AAB shall update the auditor's OASIS database record within five calendar days of the re-authentication decision.

5.4 Aerospace Quality Management System Auditor Advancement Process

- a. The process diagram for the advancement of auditor authentication from an AA to ALA or AELA is presented in Appendix G. Successful advancements shall not change or extend the applicant's existing re-authentication cycle.
- b. AAs may advance to an ALA or AELA by completing improvement activities to address technical competence weaknesses identified through the CVP. In addition, the applicant shall complete a minimum of 20 on-site audit days auditing AQMS standards (i.e., 9100, 9110, 9120). The applicant's audit log shall be provided as objective evidence of audit completion.

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- c. To apply for advancement, the applicant shall provide the following objective evidence to the AAB:
1. Declaration that the auditor has executed and completed an improvement plan that addresses the weaknesses identified within the CVP report.
 2. An audit log providing objective evidence of a minimum of 20 on-site audit days auditing AQMS standards (i.e., 9100, 9110, 9120) within the last 3 years.
 3. Objective evidence of completion of all applicable continuing education requirements, including all IAQG OPMT mandatory training. A minimum of 60 hours of formal training must be completed during a three-year authentication cycle, with a minimum of 10 hours per year.

NOTE 1: 60 hours of formal training is equivalent to 6 CEUs.

NOTE 2: Applicability of training completion, for the AQMS auditor advancement process, will be dependent on the timeframe since AA authentication (e.g., 1 year would require 10 hours).

4. An ongoing auditor performance assessment, including any feedback and associated improvement actions taken, was maintained during the authentication cycle. This evidence shall be endorsed by the applicant's Audit Program Manager (or equivalent individual) and shall be submitted with the applicant's audit log.
 5. Any additional objective evidence required by the AAB.
 6. To initiate the process, the auditor candidate shall apply for authentication as an ALA or AELA for each of the relevant AQMS standards with their selected AAB and undertake the CVP.
- d. The AAB shall complete a review of the objective evidence provided to determine conformance to the defined advancement criteria. The AAB shall complete this review and subsequent reviews within 30 calendar days of application. After completion of the review, the AAB shall provide feedback to the applicant outlining any concerns with the application.
- e. Once the AAB has validated the application satisfies the advancement criteria, the AAB shall provide the applicant with instructions for completing the CVP in order to proceed with the authentication process.
- f. The applicant shall complete the CVP, within 90 calendar days of notification by the AAB, to proceed with the advancement process. If the applicant completed the CVP within 90 calendar days, prior to the advancement application, the completed CVP results may be used for the application review and auditor grade determination.
- g. Results from the CVP shall be provided to the applicant within 30 days of completion of the CVP.

- h. The applicant shall provide the AAB with the CVP results.
- i. The AAB shall use the CVP results to continue the advancement process as follows:
 - 1. Applicants that score yellow or green for all quality management system auditing competence criteria, but score red in technical competence criteria shall continue their current authentication as an AA.
 - 2. Applicants that score yellow or green for all quality management system auditing and technical competence criteria, with supporting evidence of applicable aviation and/or space work experience, shall be authenticated as an ALA or AELA for the remainder of the current authentication cycle (e.g., three years from the initial authentication decision).
 - 3. Applicants that score red in any quality management system auditing competence criteria shall have their AA authentication time period reduced to a maximum of 12 months and shall not re-apply for advancement for a period of 12 months.
- j. The AAB shall update the auditor's OASIS database record within five calendar days of the authentication decision.

5.5 9110 Aerospace Quality Management System Auditor Authentication

- a. AQMS auditors that hold 9100 authentication may obtain authentication for the 9110 standard by submitting an application to a SMS approved AAB that includes objective evidence that all required IAQG-sanctioned 9110 training has been completed.
- b. The AAB shall complete a review of the objective evidence provided to determine conformance to the defined criteria. The AAB shall complete this review and subsequent reviews within 30 calendar days of application. After completing the review, the AAB shall provide feedback to the applicant outlining any issues or concerns with the application.
- c. Once the AAB has validated the application satisfies the 9110 auditor criteria, the AAB shall provide the applicant with instructions for completing the 9110 CVP in order to proceed with the authentication process.
- d. The applicant shall complete the CVP within 90 calendar days of notification by the AAB. If the applicant completed the CVP within 90 calendar days, prior to 9110 application, the completed CVP feedback may be used for the application review and 9110 auditor determination.
- e. Results from the CVP shall be provided to the applicant within 30 calendar days of completion of the CVP.
- f. The applicant shall provide the AAB with the CVP results.
- g. The AAB shall use the CVP results to continue the 9110 auditor authentication process as follows: