



Acceptable Means of Compliance and
Guidance Material to TCAR PEL Part - ATCO
(AMC/GM to TCAR PEL Part - ATCO)

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Approved By

Air Chief Marshal

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Director General

The Civil Aviation Authority of Thailand

THAILAND CIVIL AVIATION REGULATION (TCAR)

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INTRODUCTION AND APPLICABILITY

In this publication the word ‘should’ is used to indicate that the Organisation, Owner or Operator has a degree of latitude in adhering to the requirement, particularly where the nature of the operation - or proposed operation - affects their ability to achieve the necessary degree of compliance with the requirement; provided that an acceptable level of safety is achieved.

If the Organisation’s/owner’s/operator’s response is deemed to be inadequate by the Director General, a specific requirement or restriction may be applied as a condition of the appropriate instrument to be issued under Thailand Civil Aviation Regulations. This publication includes associated means of compliance and interpretative material wherever possible and, unless specifically stated otherwise, clarification will be based on this material or other relevant CAAT documentation.

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COVER REGULATION

GM1 Article 2(2) Compliance with the requirements and procedures

AIR TRAFFIC CONTROLLER TRAINING ORGANISATION CERTIFICATION

For the purpose of ensuring that all organisations referred to in Article 1(2) comply with the technical requirements and administrative procedures of Article 2(2), air navigation service providers providing training to air traffic controllers are subject to the requirements applicable to air traffic controller training organisations set out in this Regulation and are subject to certification in accordance with this Regulation

AMC1 Article 4(1) Definitions

ABNORMAL SITUATION

Abnormal situations may include:

- (a) circumstances arising from human error or violation of rules both within the ATC and aircraft operation;
- (b) serious weather; and
- (c) technical system failures or malfunctions of aircraft and/or ATC ground-based systems.

GM1 Article 4(6) Definitions

ASSESSMENT

The formative evaluation of practical skills during training should not be considered as an assessment.

SUBPART A — GENERAL REQUIREMENTS

GM1 ATCO.A.015(b) Exercise of the privileges of licences and provisional inability

GROUNDS FOR PROVISIONAL INABILITY

Examples of grounds for doubting the ability to safely exercise the privileges of the licence may be that the licence holder is:

- (a) unfit to perform the duties due to injury, fatigue, sickness, stress, including critical incident stress or other similar causes;
- (b) not meeting all the competence-related requirements set out in the unit competence scheme.
- (c) under the influence of psychoactive substances.

GM1 ATCO.A.015(d) Exercise of the privileges of licences and provisional inability

PROCEDURES

The procedures developed and implemented to enable licence holders declaring provisional inability to exercise the privileges of their licence, to manage the operational impact of provisional inability cases and to inform CAAT should include but are not limited to:

- (a) the processes to declare and terminate provisional inability;
- (b) an indicative list of cases when CAAT shall be informed of the declaration or termination of the provisional inability;
- (c) the processes to inform CAAT; and
- (d) the mitigating measures to be implemented to ensure sufficient capacity and the continuity of the service.

SUBPART B — LICENCES, RATINGS AND ENDORSEMENTS

GM1 ATCO.B.001(b) Student air traffic controller licence

MATURITY OF AIR TRAFFIC CONTROLLERS

Persons who wish to undertake air traffic controller training should be educationally, physically and mentally sufficiently mature. In order to assess their ability to complete air traffic controller training, training organisations may conduct aptitude assessments and/or set out educational or similar requirements which could serve as a prerequisite for commencing air traffic controller training.

AMC1 ATCO.B.001(e) Student air traffic controller licence

ASSESSMENT OF PREVIOUS COMPETENCE

When establishing previous competence in a rating, the assessment should be based on the requirements set out in Part ATCO, Subpart D, Section 2.

GM1 ATCO.B.001(e) Student air traffic controller licence

ASSESSMENT OF PREVIOUS COMPETENCE

The assessment of previous competence includes an assessment of the practical skills demonstrated by the person being assessed as well as an examination of the person's knowledge and understanding.

GM1 ATCO.B.005(f) Air traffic controller licence

ASSESSMENT OF PREVIOUS COMPETENCE

The assessment of previous competence includes an assessment of the practical skills demonstrated by the person being assessed as well as an examination of the person's knowledge and understanding.

AMC1 ATCO.B.010(a)(3);(4) Air traffic controller ratings

SURVEILLANCE FALLBACK AND CONTINGENCY MEASURES

The approach control procedural (APP) rating is not required for approach control surveillance (APS) rating holders when applying surveillance fallback and contingency measures. However, with reference to points ATCO.D.045(c)(3) and ATCO.D.080(b)(2), specific training related to surveillance fallback and contingency procedures should be included in the unit and refresher training to prepare air traffic controllers to deal with such situations.

If contingency plans also include procedures for service continuity by means of providing procedural air traffic control services, a procedural rating should be held and maintained.

AMC1 ATCO.B.010(a)(5);(6) Air traffic controller ratings

SURVEILLANCE FALLBACK AND CONTINGENCY MEASURES

The area control procedural (ACP) rating is not required for area control surveillance (ACS) rating holders when applying surveillance fallback and contingency measures. However, with reference to points ATCO.D.045(c)(3) and ATCO.D.080(b)(2), specific training related to surveillance fallback and contingency procedures should be included in the unit and refresher training to prepare air traffic controllers to deal with such situations.

If contingency plans also include procedures for service continuity by means of providing procedural air traffic control services, a procedural rating should be held and maintained.

AMC1 ATCO.B.010(f) Air traffic controller ratings

ASSESSMENT OF PREVIOUS COMPETENCE

When establishing previous competence in a rating, the assessment should be based on the requirements set out in Part ATCO, Subpart D, Section 2.

GM1 ATCO.B.010(f) Air traffic controller ratings

ASSESSMENT OF PREVIOUS COMPETENCE

The assessment of previous competence includes an assessment of the practical skills demonstrated by the person being assessed as well as an examination of the person's knowledge and understanding.

GM1 ATCO.B.015(a)(3) Air traffic controller rating endorsements

TOWER CONTROL ENDORSEMENT PRIVILEGES

Where aerodrome control is provided from one operational position, this shall be indicated in the ATC licence by the issue of a Tower Control (TWR) endorsement to the Aerodrome Control Instrument rating. Aerodrome control may either be one operational position or be divided between two operational positions, Ground Movement Control (GMC) and Air Control (AIR). Consequently, the TWR endorsement entitles the holder of that rating endorsement to either provide aerodrome control from one working position or to provide AIR or GMC separately.

AMC1 ATCO.B.020(d) Unit endorsements

VALIDITY OF THE UNIT ENDORSEMENT

When establishing the validity of a unit endorsement, the specificities of the unit and seasonal variations should be taken into account. Appropriate means should be in place to monitor the competence of the air traffic controllers. The means should be proportionate to the validity time. If the proposed validity time of the unit endorsement exceeds 12 months, additional means should be in place to monitor and ensure the continuous competence of the air traffic controllers. If the ATC unit is proposing to increase the validity time of the unit endorsement, a safety assessment should be conducted. The safety assessment may cover several units.

AMC1 ATCO.B.020(f)(3) Unit endorsements

PRACTICAL SKILLS ASSESSMENT FOR REVALIDATION OF EACH UNIT ENDORSEMENT

- (a) If the assessment of practical skills is taking the form of a dedicated assessment consisting of a single assessment or a series of assessments, the last assessment declaring the licence holder competent should take place within the three-month period immediately preceding the unit endorsement expiry date.
- (b) If the assessment of practical skills is taking the form of a continuous assessment by which the air traffic controller's competence is assessed along a defined period of time, the formal conclusion on declaring the licence holder competent should take place within the three-month period immediately preceding the unit endorsement expiry date.

GM1 ATCO.B.020(h) Unit endorsements

COMMENCEMENT OF UNIT ENDORSEMENT VALIDITY IN CASE OF EARLY REVALIDATION

For the purpose of establishing the validity period of the unit endorsement in case of early revalidation, the date of the assessment should be the date of the:

- (a) last assessment declaring the licence holder competent in case of a dedicated assessment; and
- (b) formal conclusion of declaring the licence holder competent in case of continuous assessment.

GM1 ATCO.B.025(a)(3) Unit competence scheme

MINIMUM NUMBER OF HOURS

The minimum number of hours should be defined for each unit endorsement and it should be identical for each unit endorsement holder within the same unit.

For licence holders holding more than one unit endorsement in the same ATC unit, the minimum number of hours may be defined as a combined value based on the assessment provided by the air navigation service provider.

Nevertheless, maintaining competence should be appropriately ensured for all valid unit endorsements.

AMC1 ATCO.B.025(a)(5);(6) Unit competence scheme

PROCESSES FOR ASSESSING COMPETENCE AND EXAMINING THEORETICAL KNOWLEDGE AND UNDERSTANDING

- (a) The practical performance and skills should be assessed in live traffic situations.
- (b) Theoretical competence should be examined to ascertain the knowledge and understanding of air traffic controllers.
- (c) Subjects taught during refresher training such as standard practices and procedures, abnormal and emergency situations and human factors should be assessed on STD or in other simulated environments and/or examined.

GM1 ATCO.B.025(a)(5) Unit competence scheme

ASSESSMENTS

- (a) Assessments may have one or more components.
- (b) One component should be the assessment of practical skills; other components may be oral and/or written examinations.
- (c) Practical skills assessments should be conducted as continuous assessment or dedicated practical assessment(s).
- (d) Continuous assessment. Continuous assessment should be achieved by the assessor assessing, during normal operational duties, the operational performance compared to the standard of the air traffic control service expected. Where the assessor has not been able to adequately assess the air traffic controller by continuous assessment, he/she should not certify the air traffic controller's competence until a dedicated practical assessment has been conducted.
- (e) Dedicated practical assessment. A dedicated practical assessment may consist of a single assessment or a series of assessments. To conduct a dedicated practical assessment, the assessor(s)

should sit with the air traffic controller with the purpose of assessing, under normal operational conditions, the operational performance compared to the standard of the air traffic control service expected. The air traffic controller concerned should be advised that a dedicated practical assessment is to be conducted and be briefed on the conduct of the assessment. For those situations where an applicant's performance cannot be observed at the time of the assessment (e.g. low visibility operations, military activity, etc.), the assessment may be supplemented by synthetic training device sessions and/or an oral examination.

- (f) The performance objectives' topics to be assessed should be determined in detail by the air navigation service provider. Examples of performance objectives' topics are as follows:
- application of unit regulations and procedures (e.g. minimum separation standards, letters of agreement, Aeronautical Information Publications);
 - traffic analysis and planning;
 - task priority setting;
 - communication, including phraseology;
 - capacity and expedition;
 - accuracy;
 - initiative, adaptability and decision-making;
 - air traffic control techniques;
 - teamwork and other human factors skills;
 - the level of risk associated with the tasks performed (e.g. attitudes to risk).
- (g) Procedures when failing. Notwithstanding ATCO.B.025(a)(10), when an air traffic controller fails in one or more of the components of the assessment, he/she should not be allowed to exercise the privilege of this unit endorsement, and provisional inability in accordance with ATCO.A.015(b) may be declared until a successful competence assessment has been performed. Resitting the full competence assessment or the failed part only may be required.
- (h) Record keeping. The results of all assessments, including those of the continuous assessment, and examinations should be documented and stored confidentially, accessible to the assessor and the person being assessed.

GM2 ATCO.B.025(a)(5) Unit competence scheme

ASSESSMENTS

Assessments should be adapted to the validity time of the unit endorsement of the ATC unit.

The assessment of air traffic controllers at ATC units with seasonal variations should reflect the higher volume and complexity situations.

GM3 ATCO.B.025(a)(5) Unit competence scheme

ASSESSMENTS OF REFRESHER TRAINING SUBJECTS

- (a) Assessments should be conducted primarily on a synthetic training device or offline environments.
- (b) Assessments should be conducted by appropriately qualified personnel having detailed knowledge of:

- (1) the training objectives; and
- (2) the subjects, topics and subtopics being examined or assessed.

GM1 ATCO.B.025(a)(6) Unit competence scheme

ORAL EXAMINATIONS

Oral examinations should be used to test understanding of applicable techniques and the rules governing them, particularly of unit and national air traffic control procedures. Scenario-type questioning allows the assessor to gather additional evidence of how an air traffic controller would react in circumstances that are not observable but are nevertheless considered important to the overall operation at that ATC unit.

The oral examination should give a clear indication that the air traffic controller knows not only what he/she should be doing, but why he/she should be doing it. The oral examination requires considerable skills and it should be undertaken in a way to ensure consistency among individual assessors.

GM1 ATCO.B.025(a)(9) Unit competence scheme

EXAMINATIONS AND ASSESSMENTS DURING CONVERSION TRAINING

- (a) Assessments should be conducted primarily on a synthetic training device or offline environments.
- (b) Examinations and assessments should be conducted by appropriately qualified personnel having detailed knowledge of:
 - (1) the training objectives; and
 - (2) the subjects, topics and subtopics being examined or assessed.

AMC1 ATCO.B.040 Assessment of language proficiency

GENERAL

- (a) The language proficiency assessment should be designed to reflect the tasks undertaken by air traffic controllers, but with specific focus on language rather than operational procedures and knowledge.
- (b) The assessment should determine the applicant's ability to communicate effectively using visual and non-visual communication in both routine and non-routine situations.

AMC2 ATCO.B.040 Assessment of language proficiency

ASSESSMENT

- (a) The assessment should comprise the following three elements:
 - (1) listening — assessment of comprehension;
 - (2) speaking — assessment of pronunciation, fluency, structure and vocabulary;
 - (3) interaction.
- (b) The switch between phraseology and plain language should be assessed for listening and speaking proficiency.
- (c) When the assessment is not conducted in a face-to-face situation, it should use appropriate technologies for the assessment of the applicant's abilities in listening and speaking, and for enabling interactions.

- (d) In case of revalidation of the language proficiency endorsement, the assessment may be conducted during training activities or on operational position, with prior notification to the air traffic controller to be assessed.
- (e) Irrespective of the way the assessment is organised, the requirements listed in (a) and (b) as well as the relevant provisions for language proficiency assessors should be met.

AMC3 ATCO.B.040 Assessment of language proficiency

LANGUAGE PROFICIENCY ASSESSORS

- (a) Persons responsible for language proficiency assessment should be suitably trained and qualified.
- (b) Language proficiency assessors should undergo regular refresher training on language assessment skills.
- (c) Language proficiency assessors should not conduct language proficiency assessments whenever their objectivity may be affected.

AMC4 ATCO.B.040 Assessment of language proficiency

CRITERIA FOR THE ACCEPTABILITY OF LANGUAGE ASSESSMENT BODIES

- (a) A language assessment body should provide clear information about its organisation and its relationships with other organisations.
- (b) If a language assessment body is also an air traffic controller training organisation, there should be a clear and documented separation between the two activities.
- (c) The language assessment body should employ a sufficient number of qualified interlocutors and language proficiency assessors to administer the required tests.
- (d) The assessment documentation should include at least the following:
 - (1) assessment objectives;
 - (2) assessment layout, timescale, technologies used, assessment samples, voice samples;
 - (3) assessment criteria and standards (at least for the operational, extended and expert levels of the rating scale in Appendix 1 to Subpart D, Section 1;
 - (4) documentation demonstrating the assessment validity, relevance and reliability for the operational and extended levels;
 - (5) documentation demonstrating the assessment validity, relevance and reliability for the expert level;
 - (6) procedures to ensure that language assessments are standardised within the language assessment body and in the ATC community;
 - (7) assessment procedures and responsibilities, such as:
 - preparation of individual assessment;
 - administration: location(s), identity check and invigilation, assessment discipline,
 - confidentiality/security;
 - reporting and documentation provided to CAAT and/or to the

- applicant, including sample certificate; and
- retention of documents and records.

(8) The assessment documentation and records should be kept for a period of time determined by the CAAT and made available to CAAT upon request.

GM1 ATCO.B.040 Assessment of language proficiency

LANGUAGE PROFICIENCY ASSESSORS

- (a) Persons responsible for language proficiency assessment should be either aviation specialists (e.g. current or former air traffic controllers) or language specialists with additional aviation-related training. The preferred approach for an assessment would be to form a team consisting of an operational expert and a language expert.
- (b) Language proficiency assessors should be trained in the requirements specific to the language proficiency assessment, and assessment and interlocution techniques.

GM2 ATCO.B.040 Assessment of language proficiency

Further information can be found in the 'Manual on the Implementation of ICAO Language Proficiency Requirements' (ICAO Doc 9835) and the Language Testing Criteria for Global Harmonization (ICAO Cir 318 AN/180).

AMC1 ATCO.B.045 Language training

- (a) Language training should contain communication in a job-related context particularly to handle abnormal and emergency situations and conduct non-routine coordination with colleagues, crews and technical staff.
- (b) Emphasis should be placed on listening comprehension, speaking interaction and vocabulary building.

GM1 ATCO.B.045 Language training

While it is true that many licence holders regularly have prolonged and extensive opportunities to practise — and so to maintain — their language proficiency, it is also true that a purely routine use of the language through phraseology, standard procedures and limited social contact only maintains a restricted core usage of the language which might be quite inadequate for managing unexpected and abnormal situations. Research shows that language proficiency erosion (language attrition) occurs rapidly over time; the lower the initial level, the faster the rate of erosion unless systematic strategies and a high degree of motivation counter this trend. It is very well documented that one's language and communicative proficiency, even in one's native language, deteriorates sharply under stress, therefore, it is recommended that licence holders participate in available language training.

GM2 ATCO.B.045 Language training

Training for language proficiency skills may be delegated to language training organisations with knowledge in the field of aviation.

SUBPART C — REQUIREMENTS FOR INSTRUCTORS AND ASSESSORS

SECTION 1 – INSTRUCTORS

GM1 ATCO.C.001(b)(1) Theoretical instructors

QUALIFICATION OF THEORETICAL INSTRUCTORS

Professional qualification appropriate to the subject should ensure sufficient level of current knowledge, which is relevant to the subject and its application in air traffic control.

AMC1 ATCO.C.001(b)(2) Theoretical instructors

INSTRUCTIONAL SKILLS FOR THEORETICAL INSTRUCTORS

A satisfactory demonstration of instructional skills for theoretical instructors should establish competence at least in the following areas:

- (a) lesson objectives are defined and communicated;
- (b) subject questions are fully answered;
- (c) are used appropriately;
- (d) language visual aids is unambiguous;
- (e) the lesson is correctly summarised; and
- (f) lesson objectives are fulfilled.

GM1 ATCO.C.010(c) On-the-job training instructor (OJTI) privileges

SHORTENING OF THE RATING EXPERIENCE REQUIREMENT FOR OJTI

When assessing the training organisations' request for the shortening of the rating experience requirement for OJTIs, CAAT should take into account the complexity of the traffic in the unit where the on-the-job instruction is provided, as well as the impact on the continuity and safety aspects of the service.

GM1 ATCO.C.015(b) Application for on-the-job training instructor certificate

SHORTENING OF THE LICENCE EXPERIENCE REQUIREMENT FOR OJTI

When assessing the training organisations' request for the shortening of the licence experience requirement for OJTIs, CAAT will take into account the complexity of the traffic in the unit where the on-the-job instruction is provided, as well as the impact on the continuity and safety aspects of the service.

GM1 ATCO.C.020(b) Validity of on-the-job training instructor certificate

REVALIDATION

- (a) Successful completion of the refresher training in practical instructional skills may be verified by several means, for example by:
 - (1) dedicated or continuous assessment;

- (2) peer assessment; or
 - (3) demonstration of the practical instructional skills.
- (b) The verification should be undertaken following the completion of the refresher training.

AMC1 ATCO.C.025(a) Temporary OJTI authorisation

SAFETY ANALYSIS

The safety analysis should specify the reasons for which the relevant unit endorsement requirement provided for in ATCO.C.010(b)(2) cannot be met and how the equivalent level of safety will be ensured by other means.

GM1 ATCO.C.025(a) Temporary OJTI authorisation

EXCEPTIONAL SITUATIONS

Exceptional situations for which it may be considered not to be possible to comply with ATCO.C.010(b)(2) for the purpose of the valid unit endorsement experience, and, therefore, a temporary OJTI authorisation may be granted, are the following:

- (a) establishment of a new ATC unit or new sector for the air navigation service provider;
- (b) the continuity of the existing service is endangered due to the non-availability of personnel as a consequence of a change in the air navigation service provider at the ATC unit;
- (c) new rating or rating endorsement put into operation at an ATC unit;
- (d) reopening of a temporary ATC unit.

GM1 ATCO.C.030(c)(3) Synthetic training device instructor (STDI) privileges

PROVISION OF TRAINING FOR SPECIFIC AND SELECTED OPERATIONAL TASKS

Some of the skills required for the two different aerodrome control ratings, for the two different procedural ratings, as well as for the two different surveillance ratings are the same or similar. Therefore, instruction not being specific for one rating or the training being for specific and selected operational tasks that do not require the learner to practise all of the tasks which are normally associated with a fully operational environment, may be provided by an STDI, having experience of at least two years in a rating that requires similar skills.

GM1 ATCO.C.035(a) Application for synthetic training device instructor (STDI) certificate

SHORTENING OF THE LICENCE EXPERIENCE REQUIREMENT FOR STDIs

When assessing a training organisation's request for the shortening of the licence experience requirement for STDIs, competent authorities should take into account the complexity of the training expected to be delivered by the potential STDI and the impact on the continuity of the provision of training.

GM1 ATCO.C.040(b) Validity of synthetic training device instructor certificate

REVALIDATION

- (a) Successful completion of the refresher training in practical instructional skills and current operational practices may be verified by several means, for example by:
 - (1) dedicated or continuous assessment;
 - (2) peer assessment; or
 - (3) demonstration of practical instructional skills.
- (b) Current operational practices may be refreshed by transitional and pre-on-the-job training.
- (c) The verification should be undertaken following the completion of the refresher training.

SECTION 2 – ASSESSORS

AMC1 ATCO.C.045(c)(2) Assessor privileges

DEMONSTRATION OF KNOWLEDGE OF CURRENT OPERATIONAL PRACTICES

The demonstration of knowledge of current operational practices may be achieved by establishing familiarity with current environment and operational procedures.

GM1 ATCO.C.060(b) Validity of assessor certificate

REVALIDATION

- (a) Successful completion of the refresher training in assessment skills and current operational practices may be verified by several means, for example by:
 - (1) dedicated or continuous assessment;
 - (2) peer assessment; or
 - (3) demonstration of the practical instructional skills.
- (b) Current operational practices may be refreshed by transitional and pre-on-the-job training.
- (c) The verification should be undertaken following the completion of the refresher training.

GM1 ATCO.C.065(b) Temporary assessor authorisation

EXCEPTIONAL SITUATIONS

Exceptional situations for which it may be considered not to be possible to comply with ATCO.C.045(d)(1) for the purpose of the unit endorsement experience, and, therefore, a temporary assessor authorisation may be granted, are the following:

- (a) establishment of a new ATC unit or new sector for the air navigation service provider;
- (b) the continuity of the existing service is endangered due to the non-availability of personnel as a consequence of a change in the air navigation service provider at the ATC unit;
- (c) new rating or rating endorsement put into operation at an ATC unit;
- (d) reopening of a temporary ATC unit.

GM1 ATCO.C.065(c) Temporary assessor authorisation

INDEPENDENCE OF THE ASSESSMENT

In the case of units not having sufficient number of assessors or if the independence and objectivity of the assessment from the training process is otherwise endangered, a temporary assessor authorisation may be granted.

AMC1 ATCO.C.065(d) Temporary assessor authorisation

SAFETY ANALYSIS

The safety analysis should specify the reasons for which the relevant unit endorsement requirement provided for in ATCO.C.045(d)(1) cannot be met and how the equivalent level of safety will be ensured by other means. For the purpose of ensuring the independence of the assessment for reasons of recurrent nature, the safety analysis performed could encompass the recurrent nature of the need to ensure the

independence of the assessments from the training process and provide a basis for the issue of multiple temporary authorisations based on the same reason.

SUBPART D — AIR TRAFFIC CONTROLLER TRAINING

SECTION 1 - GENERAL REQUIREMENTS

AMC1 ATCO.D.005(a)(2) Types of air traffic controller training

UNIT TRAINING

Unit training should be undertaken by holders of student air traffic controllers licence or holders of air traffic controllers licence, as appropriate, for:

- (a) the issue of an air traffic controller licence with a unit endorsement;
- (b) the addition of a unit endorsement in an air traffic controller licence;
- (c) the validation of a rating and rating endorsement, if applicable, in an existing licence;
- (d) the addition of rating endorsement in an existing licence; and
- (e) the renewal of an expired, suspended or revoked unit endorsement, where applicable.

GM1 ATCO.D.005(a)(2)(ii) Types of air traffic controller training

ON-THE-JOB TRAINING

- (a) On-the-job training may be supplemented for pedagogical reasons by theoretical instructions and computer-based training, part-task trainers or any type of simulators aiming at increasing knowledge, understanding and application of local procedures.
- (b) Hours accumulated using these training tools and methods during this phase cannot be counted towards the minimum duration of on-the-job training established in accordance with AMC1 ATCO.D.055(b)(6), with the exception of training for procedures unlikely to be encountered in the operational environment during the training.

SECTION 2

INITIAL TRAINING REQUIREMENTS

AMC1 ATCO.D.010(a) Composition of initial training

GENERAL

[Please find the link to the concerned AMC [here](#)]

AMC2 ATCO.D.010(a) Composition of initial training

LIST OF ABBREVIATIONS

[Please find the link to the concerned AMC [here](#)]

AMC1 ATCO.D.010(a)(1) Composition of initial training

BASIC TRAINING — SUBJECT OBJECTIVES AND TRAINING OBJECTIVES

[Please find the link to the concerned AMC [here](#)]

AMC1 ATCO.D.010(a)(2)(i) Composition of initial training

AERODROME CONTROL VISUAL RATING (ADV) TRAINING — SUBJECT OBJECTIVES AND TRAINING OBJECTIVES

[Please find the link to the concerned AMC [here](#)]

AMC1 ATCO.D.010(a)(2)(ii) Composition of initial training

AERODROME CONTROL INSTRUMENT RATING FOR TOWER ADI (TWR) TRAINING — SUBJECT OBJECTIVES AND TRAINING OBJECTIVES

[Please find the link to the concerned AMC [here](#)]

AMC1 ATCO.D.010(a)(2)(iii) Composition of initial training

APPROACH CONTROL PROCEDURAL RATING (APP) TRAINING — SUBJECT OBJECTIVES AND TRAINING OBJECTIVES

[Please find the link to the concerned AMC [here](#)]

AMC1 ATCO.D.010(a)(2)(iv) Composition of initial training

AREA CONTROL PROCEDURAL RATING (ACP) TRAINING — SUBJECT OBJECTIVES AND TRAINING OBJECTIVES

[Please find the link to the concerned AMC [here](#)]

AMC1 ATCO.D.010(a)(2)(v) Composition of initial training

APPROACH CONTROL SURVEILLANCE RATING (APS) TRAINING — SUBJECT OBJECTIVES AND TRAINING OBJECTIVES

[Please find the link to the concerned AMC [here](#)]

AMC1 ATCO.D.010(a)(2)(vi) Composition of initial training

AREA CONTROL SURVEILLANCE RATING (ACS) TRAINING – SUBJECT OBJECTIVES AND TRAINING OBJECTIVES

[Please find the link to the concerned AMC [here](#)]

GM1 ATCO.D.010 Composition of initial training

GENERAL

- (a) Initial training consists of basic training which is common to all applicants and rating training.
- (b) Rating training may be commenced before the completion of the basic training.
- (c) If an applicant already holds a student air traffic controller licence or an air traffic controller licence, and there is a requirement for training to achieve an additional rating (and, if relevant, rating endorsement), the applicant should not repeat the basic training objectives; however, there is a requirement to achieve the objectives contained within the relevant rating training

GM1 ATCO.D.020(d) Basic and rating training courses

The certificate of completion of initial training may take any form and title and may cover multiple candidates.

SECTION 3

UNIT TRAINING REQUIREMENTS

GM1 ATCO.D.045(a) Composition of unit training

If an applicant undertakes unit endorsement training, and there is a requirement for training to achieve an additional unit endorsement, the applicant should not repeat the training objectives covered in the first unit endorsement training; however, the objectives of the additional unit endorsement course(s) should be achieved.

AMC1 ATCO.D.045(c)(3) Composition of unit training

ABNORMAL AND EMERGENCY SITUATIONS

- (a) Training for all identified abnormal and emergency situations should primarily take place on synthetic training devices.
- (b) Training organisations should develop performance objectives for the abnormal and emergency situation training.
- (c) Where a low safety risk for the ATC service provision has been identified and agreed by the CAAT, training in abnormal and emergency situations may take place by means other than synthetic training devices.
- (d) If the pre-on-the-job training phase is not provided, the abnormal and emergency situation training should be scenario-based and as realistic as possible while maintaining operational safety.
- (e) Checklists for abnormal and emergency situations used in operations should be made available to the applicant and be available at all times during scenario training.

AMC1 ATCO.D.045(c)(4) Composition of unit training

HUMAN FACTORS

- (a) Training organisations should train the applicant during on-the-job training in team resource management, fatigue management and stress management.
- (b) Training organisations should develop performance objectives for team resource management training.
- (c) The team resource management training may also make use of synthetic training devices.
- (d) Training organisations should develop training objectives for fatigue management and stress management training.

GM1 ATCO.D.055(b)(5) Unit training plan

TRAINING METHODS

Training organisations should consider a variety of methods when conducting training leading to a unit endorsement. Although this list is not exhaustive, such methods could be:

- on-the-job;
- lecture;

- lesson/demonstration;
- case study;
- computer-based practical exercise;
- exercise;
- facilitation;
- group work;
- hands-on;
- interactive training;
- supervised practices;
- part-task practice;
- individual simulation;
- team simulation;
- group simulation;
- briefing/debriefing;
- structured briefing;
- structured debriefing;
- virtual classroom;
- role play;
- skill acquisition;
- self-study;
- self-test;
- resilience training.

AMC1 ATCO.D.055(b)(6) Unit training plan

DURATION OF UNIT ENDORSEMENT COURSES

- (a) The on-the-job training instruction as part of the unit endorsement course should be at least of the duration specified in Annex 1 to the Chicago Convention, Section 4.5.2.2.1(b).
- (b) The ratings named in Annex 1 to the Chicago Convention, Section 4.5.2.2.1(b), should be read in the context of this Regulation:
 - (1) aerodrome control rating: ADV and ADI ratings;
 - (2) approach control procedural rating: APP rating;
 - (3) approach control surveillance rating: APS rating;
 - (4) area control procedural rating: ACP rating;
 - (5) area control surveillance rating: ACS rating.

- (c) The approach precision radar control rating in Annex 1 to the Chicago Convention, Section 4.5.2.2.1(b), should be read in the context of this Regulation as APS-PAR rating endorsement according to ATCO.B.015.

AMC1 ATCO.D.055(b)(14) Unit training plan

DESIRABLE BEHAVIOURS FOR ABNORMAL AND EMERGENCY SITUATIONS

- (a) Training organisations should establish desirable behaviours for the identified abnormal and emergency situations and associate them with established procedures.
- (b) Desirable behaviours of the applicants in case of abnormal or emergency situations may be of technical or non-technical nature.

GM1 ATCO.D.060(d);(e) Unit endorsement course

TRAINING FOR RATING ENDORSEMENTS

Training for rating endorsement(s) as part of the unit endorsement course may be delegated to initial training organisations.

GM1 ATCO.D.065 Demonstration of theoretical knowledge and understanding

METHODS OF EXAMINATION

- (a) Oral examinations and/or written/computer-based examinations should be used to demonstrate the controller's knowledge and understanding.
- (1) Oral examinations
- The oral examination is used to test the understanding of applicable techniques and the rules governing them, particularly of unit and national air traffic control procedures. Scenario-type questioning allows examiners to gather additional evidence of how an applicant would react in circumstances that are not observable, but are nevertheless considered important to the overall operation at that ATC unit. Oral examinations will give a clear indication that the persons undertaking training know not only what they should be doing, but why they should be doing it. The oral examination requires considerable skills and it should be undertaken in a way to ensure consistency among individual examiners.
- (2) Written examinations
- The written examination is used to test theoretical knowledge and to a lesser degree the understanding of applicable techniques and the rules governing them, particularly of unit and national air traffic control procedures. It is easier to administer and to ensure the consistency of written examinations particularly when using multiple-choice questioning. Although multiple-choice questioning can test knowledge, it is not appropriate for determining what a controller would do in a particular operational situation. Written examinations can also be computer-based.
- (b) The most comprehensive method of testing the understanding of the person undertaking training, contrary to their possession of pure knowledge, would be a combination of written examinations that assess the knowledge of unit and national procedures, together with a separate oral examination which tests the understanding and reactions to operational situations.

GM1 ATCO.D.070 Assessments during unit endorsement courses

(a) DEDICATED ASSESSMENTS

- (1) A dedicated assessment should be carried out for the issue or renewal of a unit endorsement.
- (2) A dedicated assessment may consist of a single assessment or a series of assessments, as detailed in the unit training plan.
- (3) To conduct a dedicated assessment, the assessor(s) should sit with the applicant with the purpose of observing the quality and assessing the standard of work being carried out and, if also acting as OJTI at the same time, to maintain a safe, orderly and expeditious flow of air traffic.
- (4) The applicant concerned should be briefed on the conduct of the assessment.
- (5) For those situations where an applicant's performance cannot be observed at the time of the assessment (e.g. low visibility operations , military activity, etc.), the assessment may be supplemented by synthetic training device sessions and oral examination.
- (6) Dedicated assessments may also be conducted at any stage of training as detailed in the unit training plan, where a more definitive measure of the progress is required, for example after 50 hours of practical training.

(b) CONTINUOUS ASSESSMENT

- (1) Continuous assessment may be performed by the assessor observing the standard of the air traffic control service provided by those whose competence he/she will certify as he/she works with them during unit training or normal operational duties.
- (2) In cases where the assessors have not had sufficient contact with the applicant to adequately assess his/her performance, they will not certify the applicant's competence until they have conducted a dedicated practical assessment. The applicant concerned must be advised that a dedicated practical assessment is to be conducted.

(c) ORAL EXAMINATION

- (1) The oral examination is used to test the understanding of applicable techniques and the rules governing them, particularly of unit and national air traffic control procedures. Scenario-type questioning allows the examiners to gather additional evidence of how an applicant would react in circumstances that are not observable, but are nevertheless considered important to the overall operation at that ATC unit.
- (2) The oral examination will give a clear indication that the applicant knows not only what he/she should be doing, but why he/she should be doing it. It requires considerable skills and it should be undertaken in a way to ensure consistency among individual examiners.

SECTION 4

CONTINUATION TRAINING REQUIREMENTS

AMC1 ATCO.D.080 Refresher training

EXAMINATIONS AND ASSESSMENTS

Refresher topics should be examined or assessed using the processes described in the unit competence scheme.

GM1 ATCO.D.080 Refresher training

REFRESHER TRAINING SUBJECTS

Topics for refresher training subjects may include rarely used procedures and practices, such as seasonally dependent procedures, trends and observations from occurrence reports and results of normal operations safety surveys.

GM2 ATCO.D.080 Refresher training

REFRESHER TRAINING STRUCTURE

Refresher training may be developed and structured in accordance with the established duration of the unit endorsement it refreshes. This may mean structuring the refresher training in modular fashion. For instance, training in standard practices and procedures, abnormal and emergency situations and human factors may be given separately or integrated into any other modules.

AMC1 ATCO.D.080(b)(1);(2) Refresher training

PHRASEOLOGY TRAINING

Training organisations should develop objectives for phraseology.

AMC2 ATCO.D.080(b)(2) Refresher training

ABNORMAL SITUATION AND EMERGENCY TRAINING

Abnormal situation and emergency training should be designed to expose air traffic controllers to circumstances and situations which they do not habitually or commonly experience. The essential difference from an emergency situation is that the element of danger or serious risk is not necessarily present in an abnormal situation.

GM1 ATCO.D.080(b)(1);(2) Refresher training

EFFECTIVE COMMUNICATION

Communication misunderstanding is present in many air traffic occurrences and the consistent use of approved phraseology is designed to mitigate such occurrences.

For the purpose of refresher training, emphasis is, therefore, put on effective communication, including the use of approved phraseology, both for the use of standard practices and procedures and for abnormal and emergency situations training.

Effective communication should make use of a variety of communication modes, including the use of appropriate phraseology and radio communication. Phraseology and radio communication training is part of the linguistic training according to ICAO; radio communication phraseology samples offer learning opportunities and foster harmonisation.

AMC1 ATCO.D.080(b)(3) Refresher training

HUMAN FACTORS

- (a) Training organisations should train air traffic controllers at least in team resource management, fatigue management and stress management.
- (b) The team resource management training may also make use of STD and/or occurrence case studies.

SECTION 5

TRAINING OF INSTRUCTORS AND ASSESSORS

AMC1 ATCO.D.090(a)(1) Training of practical instructors

SYNTHETIC TRAINING DEVICES USED FOR OJTI TRAINING

For the training of on-the-job training instructors, a part-task trainer or a simulator should be used. If the synthetic training environment does not correspond to the rating of the intended instructional environment, the applicant should practise the instructional skills in those procedures in which it is intended to provide instruction for at least one day before being assessed.

AMC2 ATCO.D.090(a)(1) Training of practical instructors

ASSESSMENT OF INSTRUCTIONAL TECHNIQUES FOR PRACTICAL INSTRUCTORS

A successful assessment of instructional techniques for practical instructors should establish competence at least in the following areas:

- (a) regulatory impact on air traffic controller training;
- (b) human factors impact on air traffic controller training;
- (c) determination of the background and experience of the person undertaking training;
- (d) determination of the current level of ability of the person undertaking training;
- (e) conduct of a pre-session briefing;
- (f) planning and conduct of the training session;
- (g) demonstration and explanation of the tasks;
- (h) monitoring of the training session;
- (i) management of interventions correctly, including error correction;
- (j) evaluation of the performance of the person undertaking training;
- (k) debrief of the person undertaking training;
- (l) furnishing of written reports on the performance of the person undertaking training;
- (m) taking appropriate follow-up action towards resolving training problems;
- (n) techniques of pausing clocks; and
- (o) knowledge of technical facilities/environment.

AMC1 ATCO.D.090(a)(2) Training of practical instructors

REFRESHER TRAINING IN PRACTICAL INSTRUCTIONAL SKILLS

Refresher training in practical instructional skills should prevent knowledge and skills erosion, and, for the training of STDIs, it should be designed to maintain awareness of the current operational practices.

AMC1 ATCO.D.090(a)(3) Training of practical instructors

PRACTICAL INSTRUCTOR COMPETENCE ASSESSMENT

The practical instructor competence assessment for an OJTI may be undertaken either in live operations or on a synthetic training device. The practical instructor competence assessment for an STDI should be undertaken on a synthetic training device.

AMC1 ATCO.D.095(a)(1) Training of assessors

ASSESSOR TRAINING COURSE

A successful assessment for the purpose of the assessor training course should establish competence at least in the following areas of assessment knowledge and techniques:

- (a) regulatory environment and legal obligations;
- (b) types of assessment and their application;
- (c) performance objectives constituting air traffic controller competence;
- (d) conditions of assessments to create reliable results;
- (e) processing of assessments and administrative procedures;
- (f) giving verbal feedback and writing assessment reports;
- (g) vested interests and code of conduct;
- (h) accurately assessing competence against the performance objectives;
- (i) developing a good questioning technique and designing questions appropriate to the assessment.

AMC2 ATCO.D.095(a)(1) Training of assessors

ASSESSMENT OF ASSESSOR COMPETENCE

The assessment of assessor competence should focus on the application of the skills of an assessor. The skills should represent at least a subset of the competences taught during the assessor training course.

AMC1 ATCO.D.095(a)(2) Training of assessors

REFRESHER TRAINING IN ASSESSMENT SKILLS

Refresher training in assessment skills should prevent knowledge and skills erosion and it should be designed to maintain skills in assessment techniques and awareness of the regulatory environment.