

TRAINING PROGRAMME APPROVAL PROCESS.

GUIDANCE MATERIAL FOR INSPECTORS
CA AOC-FO-005



AIR OPERATOR and AVIATION TRAINING ORGANISATION CERTIFICATION

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TRAINING PROGRAMME APPROVAL PROCESS

1. GENERAL

1.1 The Five-Phase Process for Approval

Training curriculum approvals follow the five phase general process for approval described in this directive. The basic steps of this process must be followed. Each phase, however, may be adjusted to accommodate existing circumstances. Depending on the complexity of the Operator/ATO's request and the availability of CAA resources, the approval process may be accomplished in only a few days, or the process may last many months. The approval process applies to each Operator/ATO requesting approval of a new curriculum as with initial air operator/ATO certification, or a revision to a currently approved curriculum. Inherent in the approval process is the CAA's responsibility to deny approval of any training which does not meet regulatory requirements or which has been found deficient. Training curricula, which have been granted approval and later found either to be in conflict with regulatory requirements or to be ineffective, must be appropriately modified by the Operator/ATO, or CAA approval must be withdrawn. This guidance material establishes procedures for granting approval or withdrawing approval of all or part of a training curriculum. When appropriate, job aids have been developed to assist inspectors in the approval process of curriculum segments.

1.2 Applicability

The training approval process discussed in this manual applies to applicants for or holders of an AOC and ATO certificate.

2. INITIATING THE APPROVAL PROCESS – PHASE ONE

2.1 Initiator's Action/s

The training approval process can be initiated by either the operator or the CAA as follows:

- a) Operator/ATO Initiated. The Operator/ATO informs the CAA that it is planning to establish a new training curriculum or to change an existing curriculum.
- b) CAA Initiated. The CAA informs an Operator/ATO that revisions to its training program are required based on recently acquired information relative to training techniques, aviation technology, aircraft operational history, operator performance, or regulatory changes.

2.2 Required Information

When the Operator/ATO initiates a proposal, as it is in the pre-application phase of the certification process, one of the first steps the CAA Inspector should take is to obtain the following basic information:

- Type of operation
- Type of equipment to be operated
- Geographic areas of operation
- Proposed training schedules
- Proposed date of revenue operations
- Proposed contract training, if any
- Type of simulator to be used, if any
- Facilities to be used

3. CAA INVOLVEMENT IN PHASE ONE

3.1 Initial Process

Early in the process, the CAA and the Operator/ATO should establish, through discussion, a common understanding of both the regulatory training requirements and the direction and guidance provided in this directive. The Inspector and the Operator/ATO must examine the entire operation to ensure that any training necessitated by operational requirements, authorisations, or limitations (such as those in the specific operating provisions, minimum equipment lists, deviations, and exemptions), is included in the Operator/ATO's training curricula. The training program is the area most affected by operational changes.

The CAA Inspector should review all general requirements in the regulations and in this directive that apply to the proposed operation. The CAA Inspector should be aware of changes to the information initially provided by the Operator/ATO. The Inspector should discuss, with the Operator/ATO, the sequence and timing of events, which occur in the development, and the granting of initial and final approval of a training curriculum.

3.2 Provide Advice and Guidance

A CAA inspector should be prepared to provide advice to an Operator/ATO during training curriculum development. During phase one, the Operator/ATO must be informed of the procedure for requesting initial approval and of the types of additional supporting information that the CAA will require the Operator/ATO to submit. An Inspector should be prepared to provide advice and guidance to the operator on the following:

- The general format and content of curricula, curriculum segments, training modules, and flight manoeuvres and procedures documents.
- Courseware.
- Facilities.
- Qualifications of instructor personnel.
- Other areas of the operator's proposed training programme.

3.3 Advisory Capacity Only

Early CAA involvement is also important for the following reasons:

- CAA advice and guidance during development of training may provide a useful service to the Operator/ATO. This advice may save the Operator/ATO and the CAA from unnecessary use of resources. It may also prevent the Operator/ATO from submitting a training curriculum proposal that would not be approved by the CAA.
- The CAA Inspector can become familiar with the material the Operator/ATO intends to submit. This facilitates review of the proposal before the granting of initial approval.
- The CAA Inspector can begin planning long range needs, such as qualification of Inspectors on the Operator's aircraft, and evaluation of the Operator/ATO program's overall effectiveness.

NOTE: Early CAA Inspector involvement in the development of training programs is appropriate. A CAA Inspector, however, must act in an advisory capacity only. The Inspector must avoid active participation in the actual training program development. The Operator/ATO is responsible for the development of its own training program. The CAA inspector must not assume that responsibility.

3.4 CAA Requirements

As the Operator/ATO's proposals solidify, any significant requirements, which may affect the CAA office or Inspector resources, should be discussed with the relative divisions within the CAA. A CAA Inspector may need training on an operator's aircraft type.

3.5 Delays in Approval

The Operator/ATO should be aware of the potential for delays in approval. Such delays may be caused by any of the following reasons:

- The applicant for a certificate not meeting the schedule of events.
- The Operator/ATO failing to expeditiously transmit information to the CAA.
- A change in plans, for example, changing either the training locations or the type of aircraft.
- Inadequate, insufficient, or unclear material submitted in the formal application in phase two.
- Deficiencies in the training discovered during phases two, three, or four.
- Delays in obtaining equipment (such as simulators) or simulator approval.
- Higher priority work assigned to the CAA Inspector associated with the training approval process.

4. REQUESTS FOR INITIAL APPROVAL – PHASE TWO

4.1 Curriculum outlines

In phase two, the Operator/ATO submits its training proposal in writing, for initial approval, to the CAA. The Operator/ATO is required to submit to the CAA an outline of each curriculum or curriculum segment and any additional relevant supporting information requested by the CAA. These outlines, any additional supporting information and a letter must be submitted to the CAA. This letter should request CAA approval of the training curriculum. Two copies of each curriculum or curriculum segment outline should be forwarded along with the letter of request to the CAA

Background information:

NOTE: Training Program Regulatory Requirements:

1. A training programme manual, contains:
 - a. Training
 - b. Checking, and;
 - c. Recordkeeping policies.

An AOC holder is required to obtain CAA approval prior to using or revising its training programme.

Select the applicable SA CAR Part i.e. Part 121/127/135/138 .

CAR 121.03.1

(1) The operator of a large commercial air transport aeroplane shall establish and maintain a ground and flight training programme for flight crew members in his or her employ.

(2) The operator shall ensure that –

- (a) each flight crew member receives training in accordance with this subpart and the appropriate syllabus as prescribed in Document SA-CATS-OPS 121;
- (b) the training shall only be provided by the holder of an aviation training organisation approval issued in terms of Part 141; and
- (c) each flight crew member passes a written examination with regard to all the subjects of the training syllabus referred to in paragraph (a).

(3) The provisions of this subpart shall apply in respect of full-time and part-time employed flight crew members.

CATS-OPS-121

121.03.1

TRAINING OF FLIGHT CREW MEMBERS

1. Training syllabus

The training syllabus for flight crew members required in terms of CAR 121.03.1, is –

- (1) the syllabi prescribed in Parts 61, 63 and 64, for initial training;
- (2) the syllabi prescribed in TS 121.03.3 and 121.03.10 for conversion training;
- (3) the syllabi prescribed in TS 121.03.6, 121.03.12, 121.03.13 and 121.03.14 for recurrent training and checking and refresher training; and
- (4) the syllabi prescribed in Part 92 for initial and refresher dangerous goods training courses.

4.2 Required Information

Each Operator/ATO must submit its own specific curriculum segment outlines appropriate for its type of aircraft and kinds of operations. These outlines may differ from one Operator and or Training Organization to another and from one category of training to another in terms of format, detail, and presentation. Each curriculum should be easy to revise and should contain a method for controlling revisions, such as a revision numbering system. Curricula for different duty positions may be combined in one document, provided the positions are specifically identified and any differences in instruction are specified for each duty position. Each curriculum and curriculum segment outline must include the following information:

- Operator's name.

- Type of aircraft.
- Duty position.
- Title of curriculum and/or curriculum segment including the category of training.
- Consecutive page numbers.
- Page revision control dates and revision numbers.

4.3 Each curriculum and curriculum segment must also include the following items, as appropriate:

Note: Company Training Curricula.

Short Term Program: The company-training curricula must be attached to the formal application. The company-training curriculum must include at least the following curriculum segments for each applicable new hire crewmember or dispatcher position:

- *Company Procedures Indoctrination Training*
- *Emergency Equipment Drills Training*
- *Initial Aircraft Ground Training*
- *Initial Aircraft/Simulator Flight Training*
- Prerequisites prescribed by the SA CAR or required by the Operator/ATO for enrolment in the curriculum.
- Statements of objectives of the entire curriculum and a statement of the objective of each curriculum segment.
- A list of each training device, mock-up, system trainer, procedures trainer, simulator, and other training aids which require CAA approval (The curriculum may contain references to other documents in which the approved devices, simulators, and aids, are listed.).
- Descriptions or pictorial displays of normal, abnormal, and emergency manoeuvres and procedures which are intended for use in the curriculum, when appropriate (These descriptions or pictorial displays, when grouped together, are commonly referred to as the flight manoeuvres and procedures document. The Operator/ATO may choose to present detailed descriptions and pictorial displays of flight manoeuvres and procedures in other manuals. For example, the flight manoeuvres and procedures document may be described in an aircraft-operating manual. However, as a required part of the training curriculum, it must either be submitted as part of the curriculum or be appropriately referenced in the curriculum).
- An outline of each training module within each curriculum segment (Each module should contain sufficient detail to ensure that the main features of the principal elements or events will be addressed during instruction).
- Training hours, which will be applied to each curriculum segment and the total curriculum.
- The checking and qualification modules of the qualification curriculum segment used to determine successful course completion (such as line checks/Operator specific Familiarisation/Indoctrination training)

5. ADDITIONAL RELEVANT SUPPORTING INFORMATION – PHASE TWO

When applying for an AOC/ATO Certificate, the Operator/Organisation must submit any additional relevant supporting information requested by the CAA. This information is additional to the information the CAA finds necessary for determining whether the proposed training program is feasible and adequately supported. It is information which would be difficult to include in a curriculum outline format. The type and amount of

supporting information needed will vary depending on the type of training, aircraft types to be operated, and kinds of operations. The CAA Inspector must determine the appropriate types of supporting information to be required. This should be limited to only that information critical to the determination of the proposed training program's acceptability. The following list of types of relevant supporting information is not all-inclusive, but includes information that is typical.

5.1 Description of Facilities

A description of facilities is appropriate if the Inspector is unfamiliar with the facilities, or if the facilities are not readily available for examination.

5.2 List of Instructors

A list of ground and flight instructors and their qualifications shall be provided by the Operator/ATO. This information is particularly important if the Operator intends to use contract instructors. The CAA Inspector should determine whether the proposed instructors meet regulatory requirements and if they are qualified to conduct training.

5.3 Description of Flight Simulators Training Devices (FSTD)

A detailed description of each flight simulator and training device is appropriate when the simulator or training device is not readily available for the Inspector's examination. This detailed description is particularly important when the operator intends to **contract** for a specific flight simulator or training device. This description should provide sufficiently detailed information to enable the CAA to determine whether the training and checking to be conducted is appropriate for the level of the flight simulator or training device to be used.

Note:

1. SACAA Evaluation of FSTDs for Certification is performed by a Flight Operations Inspector qualified in "Flight Simulation Training Device Evaluation" conducted by an Approved Training Organisation.
2. Type Rated Flight Operations Inspectors other than those mentioned in note 1. may approve the related type of simulators for use by an operator after determination that there are no differences between the operator's aircraft and the simulation device, provided that the FSTD has a valid Certificate of Evaluation issued by the State in which the FSTD is situated. (If differences are observed they must be noted in the operator's approved training program). Before the FOI can approve use of a simulator it must be verified that the simulation device has a valid SACAA Certificate of Evaluation as issued by a qualified FOI as mentioned in Note 1. and keep a record of it in the AOC Certification File.
3. A Memorandum Of Understanding may be entered into between South Africa and the CAA of other States to **accept** each other's FSTD Evaluation Certificates.

5.4 Student Qualifications and Enrolment Prerequisites

A detailed description of minimum student qualifications and enrolment prerequisites is appropriate when such prerequisites are not described in detail in the curriculum. Examples of these prerequisites which may need to be detailed as supporting information include: type of airman license, aircraft type qualifications, previous training programs, minimum flight hours, experience with other commercial air transport operators, and recency of experience. This description may be useful to the Inspector when determining whether the proposed amount of detail outlined in training modules and the proposed training hours are adequate.

5.5 Training Records

Copies of training forms and records to be used for recording student progress and the completion of training may be required. This ensures the Operator/ATO has planned for the record-keeping requirements. This type of supporting information shall be required of applicants for an AOC/ATO certificate. It may also be required of Operators/ATO with any significant revision to existing training programs. These forms, records, or computer transmittal worksheets must be designed so that attendance and course completion information is recorded and retrievable for verifying regulatory compliance.

5.6 Supporting Information

Supporting information may include samples of courseware, such as training modules/lesson plans and instructor guides. Descriptions of other types of courseware, such as home study, computer-based instruction, and Line Oriented Flight Training (LOFT) scenarios, should be in enough detail to provide an understanding of how the training will be administered and of the proposed instructional delivery method. This information should describe the instructor/student interaction and indicate methods for measuring student learning.

6. INITIAL REVIEW OF REQUESTS FOR APPROVAL – PHASE TWO

In phase two the CAA Inspector must review the submitted training curriculum and supporting information for completeness, general content, and overall quality. This is the cursory review performed in the Formal Application Phase. A detailed examination of the documents is not required during phase two. If after initial review, the submission appears to be complete and of acceptable quality or if the deficiencies are immediately brought to the operator's attention and can be quickly resolved, the Inspector may begin the phase three in-depth review in the Document Evaluation Phase. If the submission is determined to be incomplete or obviously unacceptable, the approval process is terminated and the Inspector must immediately return the documents (preferably within 5 working days) with an explanation of the deficiencies. The documents must be immediately returned, so the Operator/ATO will not erroneously assume the Inspector is continuing the process to the next phase. The approval process can be resumed when the revised training curriculum or curriculum segment is resubmitted.

NOTE: An applicant for a certificate in Phases 2 and 3 of the certification process may be unable to provide all information required for its training program. For example, the applicant may not yet know what training facilities or devices it intends to use. The lack of such information in the formal application does not necessarily indicate that the training curriculum attachment be returned. There should be an understanding between the applicant and the Certification project manager (PM) that such portions are missing.

7. IN-DEPTH REVIEW OF SUBMITTED CURRICULA – PHASE THREE

7.1 Submission of Incomplete Curriculum Segments

The PM may initiate the phase three in-depth review without all the required information. Initial approval, however, of a curriculum segment must be withheld until all portions pertinent to the curriculum segment have been examined. For example, it may be appropriate to initially approve a ground training curriculum segment even though the simulator has not yet been evaluated and approved for flight training.

However, effective evaluation of training curricula can be hampered when an excessive number of incomplete curriculum segments are permitted. The PM shall either delay initial approval of training curricula or return them to the applicant when an excessive number of incomplete curriculum segments have been submitted with the formal application.

7.2 Detailed Analysis and Evaluation

Phase three is initiated when the CAA begins a detailed analysis and evaluation of a training curriculum or curriculum segment. The purpose of this phase is to determine the acceptability of training curricula for initial approval. This phase ends either with the initial approval or with the rejection of all or part of the training curriculum. To complete an evaluation in a timely manner the Inspector may need to involve other CAA personnel early in this phase. Certain specialists may be required to participate in the approval process as follows:

- A Dangerous Goods Inspector should be involved in Dangerous Goods training issues.
- Various safety inspector specialities should be involved when appropriate. For example, navigation specialists should be involved with evaluating special navigation operations.
- Additional CAA resources may need to be located to accomplish the approval process.
- The Commissioner for Civil Aviation Authority may be requested to provide assistance with obtaining training quotas for selected inspectors or with obtaining information concerning exemptions.

7.3 Inspector Responsibilities

Before granting initial approval for a specific curriculum or curriculum segment, the CAA Inspector must ensure that the following evaluations are accomplished:

A side-by-side examination of the curriculum outline with the appropriate regulations and the direction provided in this guide must be performed. This examination is to ensure that training will be given in at least the required subjects and in-flight training manoeuvres. It should also ensure that appropriate training would be given on safe operating practices.

An examination of the courseware developed or being developed by the operator must be performed. This review should include a sampling of available courseware such as training modules/lesson plans, audio-visual programs, flight manoeuvres and procedure documents, and student handouts. The courseware must be consistent with each curriculum and curriculum segment outline. From this review, the Inspector should be able to determine whether the Operator/ATO is capable of developing and producing effective training courseware.

An inspection of training facilities, training devices, and instructional aids (which will be used to support the training) must be performed if the Inspector is not familiar with the operator's training program capabilities, as would be the case for initial Air Operator/ATO certification.

The training hours specified in each curriculum segment outline must be evaluated. An Inspector should not attempt to measure the quality or sufficiency of training by the number of training hours alone. This can only be determined by direct observation of training and testing (or checking) in progress. Or, if not an initial certification, by examination of surveillance and investigation reports. The specified training hours must be realistic, however, in terms of the amount of time it will take to accomplish the training outlined in the curriculum segment so as to achieve the stated training objectives. During the examination of courseware, an Inspector should note the times allotted by the Operator/ATO for each training module. These times should be realistic in terms of the complexity of the individual training modules.

The number of training hours for any particular curriculum segment depends upon many factors. Some of the primary factors are as follows:

- Regulatory requirements.
- Complexity of the specific aircraft.
- Complexity of the type of operation.
- Amount of detail that needs to be covered.
- The experience and knowledge level of the students.
- Efficiency and sophistication of the operator's entire training program (including items such as instructor proficiency, training aids, facilities, courseware, and the Operator's experience with the aircraft).

7.4. Granting Initial Approval

If after completing these evaluations, the CAA Inspector determines that the curriculum or curriculum segment is satisfactory and adequately supported, and that the training hours are realistic, initial approval should be granted. Sometimes a portion of the submittal may appear to be satisfactory. However, if that portion is dependent upon another undeveloped portion or another unsatisfactory portion, initial approval must be withheld.

7.5 Timelines of Initial Approval

During phase three of the approval process, the Inspector must establish priorities to ensure that, if appropriate, the granting of initial approval is not unnecessarily delayed. These priorities should assure that deficiencies are resolved so that initial approval can be granted before the Operator/ATO's planned starting date for training.

8. EXPIRY DATES FOR INITIAL APPROVALS

When the Inspector determines that a training curriculum or curriculum segment should be initially approved, the Inspector must also determine an appropriate expiry date for the initial approval. The expiry date is important throughout phase four of the approval process when the Operator/ATO conducts and the CAA evaluates the training curriculum in the Demonstration Inspection Phase.

The initial approval expiry date provides an incentive to the Operator/ATO for refining all aspects of the program to assure that this requirement is met. The expiry date also provides the CAA Inspector with a time frame in which to plan evaluation activities for

determining the effectiveness of the training. The expiry date assigned to an initially approved training curriculum must not exceed 24 months from the date of initial approval. The expiry date of initial approval may be reduced by the Inspector if it is apparent that a 24-month time frame will unnecessarily delay final approval. The Inspector should be aware that shortening the initial approval expiry date would commit him/her to completing the final approval phase within the shorter time period. The Inspector may grant final approval any time before the expiry date. Except when unforeseen circumstances preclude an adequate evaluation of training effectiveness, an extension to the initial approval expiry date should not be permitted. A new expiry date, however, may be established for a curriculum segment when there are significant revisions to an initially approved curriculum segment such as the case when an Operator/ATO is establishing a new training programme or the CAA is requiring changes.

9. METHOD OF GRANTING INITIAL APPROVAL

9.1 Initial approval is granted by letter.

Sample letters granting initial approvals are included at the end of this paragraph (figures 1 and 2). The initial approval letter must include at least the following information:

- Specific identification of the curricula and/or curriculum segments initially approved, including page numbers and revision control dates.
- A statement that initial approval is granted, including the effective and expiration dates.
- Any specific conditions affecting the initial approval, if applicable.
- A request for advance notice of training schedules so that training may be evaluated.
- If the Inspector is authorising a reduction in the programmed hours, a statement concerning the basis for the reduction in requirements.

9.2 Primary Record

An initial approval letter serves as the primary record of curriculum or curriculum segment pages that are currently effective.

9.3 Inspector Responsibility

The original pages of the curriculum or curriculum segment shall be returned to the Operator/ATO with the transmittal letter. These documents should be retained by the Operator/ATO as an official record. A copy of the training curriculum or curriculum segment, with a copy of the transmittal letter granting initial approval attached, shall be maintained on file in the CAA office by the Inspector during the period that the initial approval is valid. The CAA shall also maintain on file with the curriculum all additional relevant supporting information.

FIGURE 1

LETTER OF INITIAL APPROVAL

ABC Airlines
Director of Operations/Training (as appropriate)
(appropriate address)

Dear Mr. Smith:

Effective _____, initial approval is granted to ABC Airline's Second in Command Initial Equipment Flight Training, pages 1 through 10, dated March 11, 0000.

Initial approval of this training curriculum shall remain in effect until _____, (24- months later), or upon the granting of final approval, whichever occurs first. ABC Airlines is requested to notify this office at least 24 hours in advance of any training to be conducted under this program so that the CAA may evaluate the effectiveness of the training.

Inspector name and signature

FIGURE 2

LETTER OF INITIAL APPROVAL

ABC Airlines
Director of Operations/Training (as appropriate)
(appropriate address)

Dear Mr. Townsend:

This letter is in reference to ABC Airline's B-737 Pilot in Command Ground Training curriculum, pages 100/1 through 100/15, dated April 14, 0000. This curriculum is granted initial approval, effective April 30, 0000. The approval is contingent upon a satisfactory evaluation of your advanced systems ground trainer scheduled for April 28 and 29, 0000.

The expiration date of this initial approval is April 30, (24-months later). This office requests ABC Airlines provide at least 7 days advance notice of any training to be conducted under this curriculum to allow for evaluation of the training.

Approval of the reduced training hours from the programmed training hours currently in effect will be based on the demonstrated improved training techniques available from your advanced systems ground trainer.

CAA Inspector name and signature

10. METHOD OF DENYING INITIAL APPROVAL

If the CAA determines that initial approval of a proposed training curriculum or curriculum segment must be denied, the Operator/ATO shall be notified in writing of the reasons for denial. This letter must contain an identification of the deficient areas of the training curriculum and a statement that initial approval is denied. It is not necessary that each minor deficiency, which resulted in the denial, be identified; however the major deficiencies should be outlined in the letter. It is the Operator/ATO's responsibility to redevelop or correct the deficient area before resubmission to the CAA. A copy of the denial letter and a copy of the proposed training curriculum or curriculum segment shall be kept on file in the CAA office. Figure 3 is a sample letter of a denial of initial approval.

FIGURE 3

LETTER OF DENIAL OF INITIAL APPROVAL

ARK Airlines
Director of Operations/Training (as appropriate)
(appropriate address)

Dear Mr. Townsend:

This letter is in response to your request for initial approval of Revision 2 to ARK Airline's DC-9 Pilot in Command and Second in Command Recurrent Ground Training curriculum, dated August 2, 0000. Your request for initial approval of revision 2 is denied for the following reason:

More than 70 percent of your scheduled operations occur in areas, which during the winter months, are subject to cold weather, snow, ice, and sleet. Your pilot workforce must have adequate training in the safe operating practices associated with a cold weather environment, to enable them to cope effectively with such hazards. Revision 2 deletes training previously given on major aspects of cold weather operations and does not provide any identifiable instruction to your crews for operating flights in such conditions. Presently there is not another course of training for ARK Airline's pilots containing adequate information on cold weather procedures.

CAA Inspector

11. EVALUATING INITIALLY APPROVED TRAINING CURRICULA – PHASE FOUR

11.1 Demonstration

The Demonstration and Inspection Phase begins when the Operator/ATO starts training under the initially approved curriculum. This phase should provide the Operator/ATO with adequate time to test the program and the flexibility to adjust the program during CAA evaluation. The Inspector must require an Operator/ATO to provide ongoing schedules of all training and checking to be accomplished under an initially approved training curriculum. The Inspector must closely monitor training conducted under initial approval. Whenever possible, the first session of training conducted under initial approval should be monitored by the CAA Inspector.

A CAA inspector does not need to observe every training session. A sufficient sampling of the training sessions, however, should be observed as a basis for a realistic evaluation. Inspectors qualified in the type aircraft, and other individuals knowledgeable of the curriculum subject matter, should assist in evaluating the training. During training under initial approval, the Operator/ATO is expected to evaluate and appropriately adjust training methods as needed. Often adjustments can be made by changing courseware and instructional delivery without (or with only minor) revisions to the initially approved curriculum. Conversely, it may be necessary for the Operator/ATO to substantially change the curriculum that may require another initial approval action by the CAA before the changes can be put into effect. Sometimes proposed revisions may be transmitted to the CAA just before the initial approval expiration date. If the change is significant, the CAA Inspector may need to establish a different expiration date for the curriculum segment, or for the revised portions, to allow adequate time for a proper evaluation.

11.2 Deficiencies

During phase four, the Operator/ATO must demonstrate the ability to effectively train crewmembers. Each deficiency identified during the evaluation of training conducted under an initially approved curriculum must be discussed with the Operator/ATO. If the deficiencies are significant, they must be documented and kept on file. In most cases, when the cause of a deficiency has been accurately identified, the Operator/ATO will make the necessary changes to correct the deficiency to obtain final approval. Each significant deficiency that has been accurately identified must be immediately corrected. If an Operator/ATO does not take appropriate corrective action, the CAA Inspector shall advise the Operator/ATO in writing that initial approval is withdrawn.

12. ELEMENTS AVAILABLE FOR EVALUATING TRAINING – PHASE FOUR

The CAA Inspector must develop a plan for systematically evaluating training given under the initially approved training curriculum. This plan should remain in effect throughout the initial approval period. There are four elements that can be evaluated when assessing the overall effectiveness of training programs. These four elements are: curriculum segment outlines, courseware, instructional delivery methods and training environment, and testing and checking. These elements are interrelated; however, each can be separately evaluated.

12.1 Curriculum Segment Outlines

Before evaluating a training program, an Inspector must become familiar with the contents of the curricula or curriculum segments to be evaluated. This preparation is essential if an Inspector is to determine whether an Operator/ATO has developed an effective course of instruction from its initially approved training curriculum. For initial certification, this would have been conducted in the Document Evaluation Phase.

12.2 Courseware

Direct examination of courseware includes reviewing materials such as training modules/lesson plans, workbooks, or flight instructor guides. The Inspector must determine whether the courseware is consistent with the curriculum or curriculum segment and that it has been developed to facilitate effective instructional delivery. Courseware is usually the training program element that is most adaptable to revision or refinement. Inspectors must review at least a sampling of the courseware.

12.3 Instructional Delivery Methods

Direct observation of instructional delivery includes surveillance of training methods, such as instructor lectures, computer based instruction presentations, and in-flight instruction. Effective learning can only occur when an instructor is organised, prepared, and properly uses the courseware and various training aids. The Inspector must determine that the instructional delivery is consistent with the courseware. For example, the Inspector should note whether the instructor teaches the topics specified in the training module/lesson plan. Training aids and devices should function as intended during the instructional delivery. In addition, during training, the Inspector should be sensitive to the type of questions being asked by students and should identify the reasons for any excessive repetition. These conditions may indicate ineffective instructional delivery or courseware. The Inspector must also determine if the instructional environment is conducive to learning. Distractions, which adversely affect instructional delivery, such as excessive temperatures, extraneous noises, poor lighting, cramped classrooms or workspaces, are deficiencies because they interfere with learning.

12.4 Testing and Checking

Direct observation of testing, checking and assessing is an effective method for determining whether learning has occurred. Examining the results of tests, such as oral or written tests or flight checks or assessments, provides a quantifiable method for measuring training effectiveness. The Inspector must examine and determine the causal factors of significant failure trends.

12.5 Definitions:

Curriculum Segment Outlines - Curriculum segment outlines contain the specific training modules and the amount of time allocated for the curriculum segment. The modules must be consistent with regulatory requirements and safe operating practices. This element requires direct examination.

Courseware - Courseware converts curriculum outline information into usable instructional material. Courseware must be consistent with the curriculum outline and be organised to permit effective instructional delivery. It is readily adaptable to adjustments and refinement by the operator. This element usually requires direct examination.

Instructional Delivery Methods and Training Environment - Instructional delivery methods are used to convey information to the student. Effective learning is maximized if the instructional delivery adheres to and properly uses the courseware. The training environment should be conducive to effective learning. This element requires direct observation.

Testing And Checking - Testing and checking is method for determining whether learning has occurred. Testing and checking standards are used to determine that a desired level of knowledge and skill has been acquired. Testing and checking also measures the effectiveness of courseware and instructional deliver. This element requires direct observation. It can be supplemented by examining operator records of test and checks.

If the results of the inspection are acceptable and no discrepancies are found the inspectors should:

1. Inform the operator (debrief).
2. Continue with the certification process.
3. Complete "final approval" documentation.
4. File the demonstration results.

13. METHOD FOR GRANTING FINAL APPROVAL – PHASE FIVE

The granting of final approval of an Operator/ATO's training curriculum should be based on the results of the evaluation, the CAA Inspector must determine whether to grant or deny final approval of a training curriculum. This determination must be made before, the expiration date of the initial approval. If the Inspector decides that final approval should be granted, the following procedures apply:

13.1 Programs that Contain a List of Effective Pages

Final approval of the training curriculum can be granted and documented by the Inspector on the List of Effective Pages. This means that the CAA has given final approval of every page of the operator's training curriculum, as listed on that page.

The stamped page that documents final approval of the training curriculum and/or curriculum segment shall be stamped for approval, dated, and signed by the Inspector.

The original curriculum and/or curriculum segment must contain the one page that documents CAA approval on the List of Effective Pages. The curriculum and/or curriculum segment must be transmitted to the Operator/ATO with an approval letter signed by the CAA Inspector in accordance with this directive.

13.2 Programs that do not contain a List of effective Pages

The original and a copy of each page of the training curriculum and/or curriculum segment shall be stamped for approval, dated, and signed by the Inspector. The approval stamp shall appear on each page.

13.3 Other Requirements

The original stamped curriculum or curriculum segment must be transmitted to the operator with an approval letter signed by the Inspector. This letter must specifically identify the curriculum or curriculum segment; contain a statement that final approval is granted; and provide the effective date of approval. This letter must also state that final approval shall remain in effect until otherwise notified by the CAA that a revision is necessary in the interest of safety. If the Inspector is authorising a reduction in the programmed hours specified by regulations, the letter must contain a statement concerning the basis for reduction. A copy of the stamped curriculum or curriculum segment, and a copy of the approval letter must be kept on file in the CAA office. Figures 4 and 5 are sample letters of final approval.

FIGURE 4

LETTER OF FINAL APPROVAL

ABC Airlines
Director of Training
(appropriate address)

Dear Mr. Townsend:

Final approval is granted to ABC Airlines' Flight Attendant Recurrent Ground Training curriculum, for pages 1 through 5, dated May 21, 1987, and for pages 6 through 7, dated April 15, 0000.

The effective date of final approval is January 20, 0000. ABC Airlines may continue to train in accordance with this curriculum unless a revision is required by the CAA in the interest of safety or, until ABC Airlines revises the curriculum.

Approval of a reduction in training hours from 16 hours to 8 hours is based on ABC Airline's continued use of the SAS A-300 cabin training mock-up.

CAA Inspector name and signature

FIGURE 5

LETTER OF FINAL APPROVAL

ABC Airlines, Inc.
Director of Operations
(Appropriate address)

Dear Mr. Smith:

Final approval is granted to ABC Airlines, Inc., Beech 99 Pilot in Command Upgrade Ground Training curriculum, pages 1 through 6, dated December 10, 0000.

The effective date of this final approval is June 9, 0000. ABC Airline may continue to train in accordance with this curriculum unless a revision is required by the CAA in the interest of safety or, until ABC Airlines revises the curriculum.

CAA Inspector name and signature

14. WITHDRAWING OF APPROVAL OF TRAINING CURRICULA

Before withdrawing approval of a certificated Operator/ATO's training curriculum or curriculum segment, the Inspector shall make reasonable efforts to convince the Operator/ATO to make the necessary revisions. It is important to understand that withdrawing approval could be detrimental to the Operator's business. The Operator/ATO's ability to hold a certificate may be in question if a new curriculum is not submitted for initial approval within a reasonable period of time. A decision to withdraw approval must be based on sound judgment and justifiable safety reasons. When sufficient reasons are established, it is mandatory for the CAA Inspector to take immediate action to remove CAA approval from an ineffective or noncompliant training curriculum. When an approval is withdrawn, the Inspector must ensure that the operator clearly understands that any further training conducted under an unapproved curriculum is contrary to the requirements. The two methods for withdrawing approval of a training curriculum are as follows:

- Allowing an initially approved training curriculum to expire without granting final approval.
- Withdrawing approval of an initially approved training curriculum before the expiration date.

15. EXPIRED TRAINING CURRICULA

A training curriculum granted initial approval has an expiry date. Usually, this date shall not be later than 24 months after the initial approval date. If the Inspector does not grant final approval before the expiry date, training under that curriculum must terminate as of that date. Therefore, the Inspector shall not allow an initially approved curriculum to expire due to the CAA's inability to administratively grant final approval. Final approval may not be granted to an Operator/ATO for the training curriculum for several reasons. One reason, for example, may be the Operator/ATO's inability to achieve an acceptable level of training effectiveness during phase four. Another example of a reason for not granting final approval is the discontinued use of the initially approved curriculum. When the Inspector decides not to grant final approval before the expiry date, he/she must notify the operator of this decision in writing, at least 30 days before the expiry date.

An operator not so notified, may mistakenly assume that the initial approval will continue in effect until receipt of notification of either final approval or termination. The notification letter should contain the reasons for allowing the curriculum to expire and should state that any further training under the expired curriculum will not be in compliance with regulatory requirements. An Inspector who fails to provide this 30-day notification must establish a new expiration date so that appropriate notification can then be given to the Operator/ATO.

**FIGURE 6
LETTER OF WITHDRAWAL OF INITIAL APPROVAL**

ABC Airlines, Inc.
Director of Training
(appropriate address)

Dear Mr. Roberts:

This letter notifies you that CAA initial approvals of the following training curriculum segments are withdrawn, effective April 1, 0000:

1. The emergency training segment for the DC-9 Second in Command Initial Training curriculum, pages 9.1 through 9.3, dated 11/15/00.
2. The emergency training segment for the DC-9 Pilot in Command Upgrade Training curriculum, pages 9.31 through 9.33, dated 6/1/00.

The investigation of the in-flight incident that occurred on ABC Airline's flight 943 on February 10, 0000 revealed that the flightcrew did not take positive action to isolate the source of smoke caused by malfunctioning cabin light ballast. During the CAA interview, the flightcrew displayed a lack of concern about the importance of taking immediate and positive action to control in-flight fire and smoke. In addition, since this incident, inspectors from this office have been emphasising fire and smoke combating procedures during oral testing of the DC-9 pilots taking the above listed training. These inspectors have observed that many of your DC-9 pilots have a serious lack of knowledge about fire and smoke control procedures and the use of firefighting equipment, particularly the type of extinguishers to be used in different classes of fire.

We have discussed these deficiencies with your staff and they have effectively revised the Emergency Training curriculum segment for the DC-9 PIC/SIC Recurrent Training. Your staff, however, advises that they will not revise the training curricula listed above. Therefore, CAA initial approval is withdrawn. Initial approval can be re-obtained by revising the curriculum to require detailed instruction on fire and smoke control procedures and firefighting equipment.

It is contrary to CAR Part , for an AOC holder to use pilots in commercial air transport operations who have not been trained in accordance with a CAA approved training curriculum.

CAA Inspector Name and signature

16. EXAMPLE TRAINING PROGRAM

Description and Regulatory Requirements

1. **Background:** SA-CATS-OPS-121.04.2,2.4 requires that the Operations Manual Part 4 document the training syllabi and checking programmes for

- Flight Deck Crew,
- Cabin Crew and
- Operations Personnel.

Part 4 must also include the procedures for training and checking, the procedures to be applied in the event that personnel do not achieve or maintain the required standard, as well as the record keeping of training documentation.

Note: In line with ICAO requirements and "International Best Practice" an operator is prohibited from using any person from serving as a crewmember or flight operations officer/flight dispatcher unless the person has completed (CAA approved Curriculum) Company Procedures Indoctrination Training.

2. **"SA-CATS-OPS-121.04.2**
2.4 PART 4: TRAINING

- (1) *Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight.*
- (2) *Training syllabi and checking programmes must include:*
- (a) *For flight deck crew*
All relevant items prescribed in Parts 61 and 63 and Subpart 3 of Part 121;
- (b) *For cabin crew*
All relevant items prescribed in Part 64 and Subpart 3 of Part 121;
- (c) *For operations personnel concerned, including flight crew members:*
(i) All relevant items prescribed in Part 92; and
(ii) All relevant items regarding operator security.
- (d) *For operations personnel other than flight crew members (e.g. dispatcher, handling personnel etc.)*
All other relevant items pertaining to their duties.
- (3) *Procedures*
- (a) *Procedures for training and checking.*
- (b) *Procedures to be applied in the event that personnel do not achieve or maintain the required standards.*
- (c) *Procedures to ensure that abnormal or emergency situations requiring the application of part or all of abnormal or emergency procedures and simulation of IMC by artificial means, are not simulated during commercial flights.*
- (4) *Description of documentation to be stored and storage periods."*

3. **The training programme to be submitted must cover all legislated training** i.e. Indoctrination and Initial Training, Recurrent, Type, Differences, Refresher and any other Training offered by the Operator/ATO for approval by the CAA.
4. In the case of operators who do not have the accreditation to conduct the above crew training, the training programme shall form part of the Operations Manual Part 4. This document forms part of the actual FOM, but may be submitted as an Appendix to the manual.
5. In the case of ATOs, the training programme may form part of the Manual of Procedures, or be submitted as an appendix to the manual.
6. The training programmes shall be submitted to the CAA Flight Operations Department and Cabin Safety Unit respectively for approval.


Note:

The following Appendices may be found in the ISO register on the CAA intra-net and are examples of / templates for Training Programs that Inspectors have to provide to Operators as examples for the development of their Training Programs:

All CAA comments/requirements are indicated in red italics.

Note: The following are extracts from the MOP FO:

MOP FO: Inspector Handbook Technical Guidance Material

	<h1 style="margin: 0;">AOC TGM INDEX</h1> <h2 style="margin: 0;">Table Of Contents</h2>	
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1. “Short Term” Training Programs for New Operators (“new hire” crew and flight operations staff): *This document is an example of an indoctrination training program – operators are required to a*

Appendix A: Company Basic Indoctrination Training - Note the example must be adapted to suit the operation, bearing in mind that the example is the minimum requirement. The same format must be used to develop recurrent, type rating and refresher training programs.

CA AOC-FO-005	Training Programme Approval Process		OPS/MD – 005
CA AOC-AC-FO-019a	a. Training Program Example for Indoctrination Training (Appendix A)		FAA

Appendix B,C,D: Initial training programmes for new hire personnel and Existing Operators adding new/different aircraft types to their existing pool – the operator is required to adapt the example to suit their operation, bearing in mind that the examples are the minimum requirement.

CA AOC-AC-FO-019b		b.	Training Program Example for Initial Ground Training (Appendix B)		FAA
CA AOC-AC-FO-019c	Aircraft specific	c.	Training Program Example for CPT (Appendix C)		FAA
CA AOC-AC-FO-019d		d.	Training Program Example for Initial Simulator Flight Training (Appendix D)		FAA

2. “Long Term” Training Programs for Existing Operators:

These are some examples and do not cover the entire scope of required long term training required.

CA AOC-AC-FO-019e		e.	Training Program Example for Recurrent Ground Training (Appendix E)		FAA
CA AOC-AC-FO-019f	Aircraft specific	f.	Appendix F: Training Program Example for Recurrent Simulator Flight Training)		FAA