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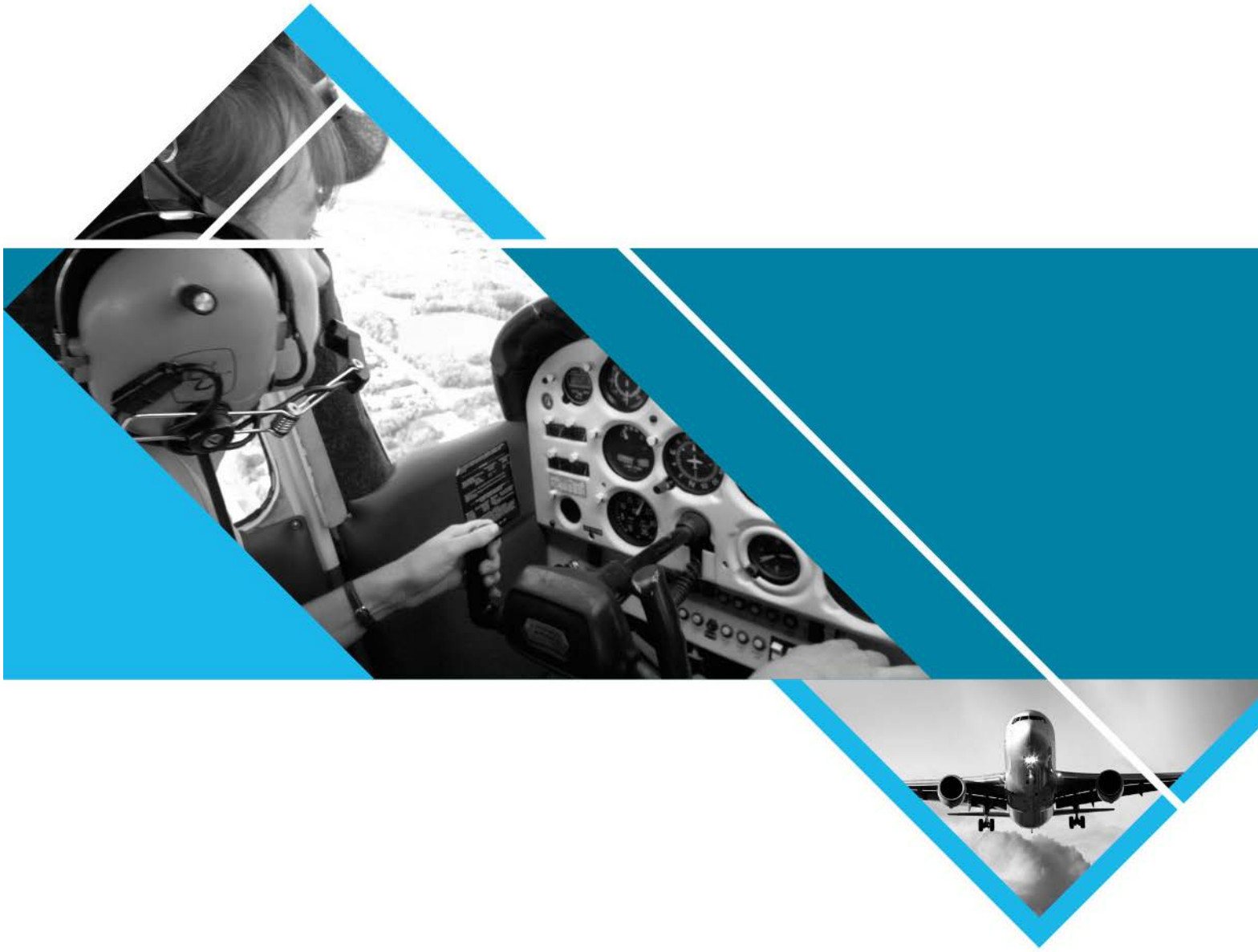

Air Operator's Certificate Handbook
Volume 4 - Specialist Areas

Date	November 2016
Approval Tier	Three
Approver	Director of Aviation Safety
Sponsor	Group Manager, Aviation Group
Review Date	November 2017
CASA Ref	D16/444386

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This is an internal CASA policy manual. It contains guidance material intended to assist CASA officers and delegates in carrying out their regulatory responsibilities and is available to the public for information purposes only.

You should not rely on this manual as a legal reference. Refer to the civil aviation legislation—including the Civil Aviation Act 1988 (Cth), its related regulations and any other legislative instruments—to ascertain the requirements of, and the obligations imposed by or under, the law.

Preface

As a Commonwealth government authority, CASA must ensure that the decisions we make, and the processes by which we make them, are effective, efficient, fair, timely, transparent, properly documented and otherwise comply with the requirements of the law. At the same time, we are committed to ensuring that all of our actions are consistent with the principles reflected in our Regulatory Philosophy.

Most of the regulatory decisions CASA makes are such that conformity with authoritative policy and established procedures will lead to the achievement of these outcomes. Frequently, however, CASA decision-makers will encounter situations in which the strict application of policy may not be appropriate. In such cases, striking a proper balance between the need for consistency and a corresponding need for flexibility, the responsible exercise of discretion is required.

In conjunction with a clear understanding of the considerations mentioned above, and a thorough knowledge of the relevant provisions of the civil aviation legislation, adherence to the procedures described in this manual will help to guide and inform the decisions you make, with a view to better ensuring the achievement of optimal outcomes in the interest of safety and fairness alike.

Shane Carmody
Chief Executive Officer and
Director of Aviation Safety

Table of contents

Revision history

Amendments/revisions of this Manual are recorded below in order of most recent first.

Version No.	Date	Parts/Sections	Details
1.1	November 2016	All	Complete revision
1.0	October 2012	All	First issue

1. Dangerous Goods

1.1 Introduction

This chapter provides an outline of the information required in a Dangerous Goods Manual and details the CASA assessment process in relation to Dangerous Goods Manuals, practices and training when considering an application for an AOC.

The Dangerous Goods Manual must be acceptable to CASA but does not require a separate approval.

1.1.1 External References

Regulatory references used to assess the standard for Entry Control or AOC variations are:

- Civil Aviation Act 1988 - section 23: Dangerous goods (CAA);
- Civil Aviation Safety Regulations 1998 - Part 92 – Dangerous goods (CASR);
- Civil Aviation Regulations 1988 - regulation 215 (CAR);
- ICAO Technical Instructions for The Safe Transport Of Dangerous goods By Air - ICAO Doc 9284: AN/905 (ICAO TI); and/or, the IATA Dangerous goods Regulations (IATA DGR) current editions;
- Emergency Response Guidance for Aircraft Incidents Involving Dangerous goods - ICAO Doc 9481: AN/928 (ERG)

It is important that all stakeholders understand the dangerous goods entry control or variation process so that applications for can be processed expeditiously and with minimal cost of resources or finances.

1.2 Responsibilities

1.2.1 CASA Responsibilities

As part of an AOC application or AOC variation process, the operator must provide CASA with a Dangerous Goods Manual containing all processes, procedures and documents relating to the acceptance and carriage of dangerous goods.

1.2.2 Applicant’s Responsibilities

The Dangerous Goods Manual details the policies and procedures for the handling, acceptance and carriage of dangerous goods on board an operator’s aircraft.

The type of detail and extent of information included in a Dangerous Goods Manual will be dictated by the nature of the operation and the operator’s policy on which classes or the quantities of dangerous goods that will be accepted for carriage.

1.2.3 AOC Operations Specification

The applicant for an AOC must decide the types of dangerous goods carriage that will apply to their operation when completing an AOC application or AOC variation using CASA Form 1049 AOC Application Form Part H1- Dangerous Goods Operations.

There are 4 dangerous goods options available that may be detailed within the AOC Operations Specification. However, selection of option 4 immediately excludes options 1, 2 and 3.

The four options are either a combination of 1, 2 and 3, or option 4 only:

- Option 1 – Operator carries dangerous goods under the provisions for passengers and crew
- Option 2 – Operator will carry dangerous goods only in COMAT (company materials)
- Option 3 – Operator will carry dangerous goods as cargo
- Option 4 – Operator not approved to carry any dangerous goods

If choosing option 4, the operator is not permitted to carry dangerous goods except for those permitted due to an 'excepted' type of operation, but the requirements for documented processes and procedures in the Operations Manual are still required.

Examples of 'excepted' operations are:

- to provide medical aid to a patient during flight
- to provide veterinary aid or a humane killer for an animal during flight
- for dropping in connection with agricultural, horticultural, forestry, avalanche control, ice jam control and landslide clearance or pollution control activities
- to provide aid during flight in connection with search and rescue operations.

1.2.4 Permissions under Section 23 of the CAA

In some circumstances an operator may wish to conduct operations involving the carriage and use of dangerous goods during flight. Some of these operations require permission of CASA issued in accordance with section 23 of the Civil Aviation Act 1988.

Examples of these include:

- the carriage and use of dry ice to cool specialised photographic equipment during flight
- the carriage and use of a petrol powered pressure washer during flight for use during powerline insulator washing
- the carriage of skidoos containing fuel and used in Antarctic operations
- the carriage of law enforcement officers in circumstances not covered by regulation 92.160 of CASR
- the carriage of fuel containers and petrol powered equipment during certain charter flights where the only persons on the aircraft apart from the pilot are persons requiring the fuel for use with their equipment
- the carriage of refrigerant gases or fuel to remote locations by operators of small aircraft who cannot comply fully with Part 92 of CASR Operator dangerous goods.

A Dangerous Goods Manual is still required.

The application for the permission to carry dangerous goods is made using CASA Form 361 and applicants should use the guidance contained in Advisory Circular AC 92-04.

1.2.5 Application Forms

The following is a list of application forms available for use by the operator:

Table 1: Application Forms

AOC Handbook Vol. 4 - References	Application Forms
Permissions under Section 23 of the CAA (Section 1.2.4)	Form 361 – Application for Permission to Carry Consign DG
DG Training Course Approval (Section 1.7.3)	Form 1536 – Application for Approval of a Dangerous Goods Training Course
DG Instructor Approval (Section 1.7.3)	Form 1537 – Application for Approval to Instruct an Approved Dangerous Goods Course

1.2.6 Assessment Checklists

The following checklists will be used during assessments. CASA recommends the operator reviews their processes and procedures having regard to the checklists.

Table 2: Assessment Checklist References

AOC Handbook Vol. 4 - References	Assessment Checklist Reference
Permissions under Section 23 of the CAA (Section 1.2.4)	Form 361 – s23 Permission Checklist
Contents of the manual (Section 1.3.4.1)	Form 1441 – Dangerous Goods Manual Evaluation
Dangerous Goods Manual (Section 1.3)	Form 1443 – Dangerous Goods Manual – On-site Inspection
Verification and Testing (Section 1.5)	Form 1444 – Acceptance of dangerous goods
	Form 1445 – Passenger Check-in (Dangerous goods)
	Form 1446 – Flight Crew – Cabin Crew – Load Controllers (Dangerous goods)
	Form 1447 – Non Dangerous Goods Cargo Acceptance
Dangerous goods Training (Section 1.7.4)	Form 1448 – Dangerous goods Training
DG Training Course Approval (Section 1.7.3)	Form 8881 – Dangerous Goods Training
DG Instructor Approval (Section 1.7.5.3.3)	Form 138 – DG Instructor Assessment
	Form 1567 – DG Instructor Approval Checklist

1.3 Dangerous Goods Manual

1.3.1 What is in a Dangerous Goods Manual?

The Dangerous Goods Manual details the policies and procedures for the handling, acceptance and carriage of dangerous goods on board an operator's aircraft.

The type of detail and extent of information included in a Dangerous Goods Manual will be dictated by the nature of the operation and the operator's policy on which classes or quantities of dangerous goods will be accepted for carriage.

Sub-regulation 215 (3) of the CAR permits CASA to direct an operator to include certain material or to require certain distribution or revision of the Dangerous Goods Manual.

1.3.2 The purpose of the Dangerous Goods Manual

The purpose of the Dangerous Goods Manual

The purpose of the Dangerous Goods Manual is to provide the operator's employees with information and instructions enabling them to carry out their duties and responsibilities with regard to the handling and carriage of cargo and dangerous goods on the operator's aircraft. The manual may be incorporated as an element within the Operations Manual.

It is very important to provide these instructions to employees in a manual which is accessible to those employees.

The operator must ensure that the contents of the manual are accurate and relevant to their operation and not simply a means to fulfil a regulatory requirement. The carriage of undeclared dangerous goods or incorrectly consigned dangerous goods has the potential to cause a serious incident.

When writing the manual, the operator should use industry or local knowledge of potential shippers and what they may offer for carriage, to identify areas of risk that may impact on safe carriage of cargo.

1.3.3 Who is required to have a Dangerous Goods Manual?

General

A Dangerous Goods Manual is required by commercial operators who carry dangerous goods:

- as consigned freight
- in passenger's checked or carry-on baggage
- belonging to the operator and are being returned after replacement or carried to replace those dangerous goods that are required to be on board the operator's aircraft for airworthiness or operational reasons (For example; aircraft batteries, fire extinguishers, life rafts and life vests)
- intended to provide, during flight:
  - medical aid to a patient
  - veterinary aid or a humane killer for an animal
  - aid in connection with a search and rescue operation
  - for dropping in connection with forestry, horticultural or pollution control activities.

Foreign Operators

A foreign commercial operator operating in Australian territory should maintain a Dangerous Goods Manual in accordance with the requirements of the State of Registry of the aircraft, or, if that State has no such law, in accordance with the requirements of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air or IATA Dangerous Goods Regulations (DGR).

Exemptions

Operators engaged in agricultural operations only are not required to have a Dangerous Goods Manual.

1.3.4 Development of a Dangerous Goods Manual

Contents of the Manual

The recommended layout and content of a Dangerous Goods Manual is contained in Advisory Circular 92-2.

The CASA Inspector will use the material contained within AC 92-2 as the basis of the assessment of a Dangerous Goods Manual.

Where instructions in the Dangerous Goods Manual refer to another manual, then the manual referred to, or the relevant part of it, must be made available and accessible to the employees required to comply with those instructions.

CASA will not issue a permission under section 23 of the Civil Aviation Act 1988:

- if the operator does not have a Dangerous Goods Manual
- for the carriage of a class of dangerous goods not covered in the operator's Dangerous Goods Manual.

For further information regarding applying to CASA for a section 23 Permission, refer to Section 1.2.4 of the AOC Handbook Volume 4.

Company Policy

The following policies should be included:

- company policy regarding:
  - dangerous goods that may not be carried
  - dangerous goods of the operator
  - dangerous goods that may be carried on special operations (For example Search and Rescue (SAR), air ambulance, tactical law enforcement, and incendiary dropping)
- operator variations
- existing CASA permissions, approvals or exemptions relating to dangerous goods
- employees authorised to accept dangerous goods on behalf of the operator (this may be expressed by name or position title)
- where the responsibility is contracted to an agent, a reference to that agent.

Procedures

The following procedures for accepting and storing cargo (including dangerous goods) should be included:

- methods to aid the identification of hidden or mis-declared dangerous goods
- lists of commonly mis-declared items
- requirement for consignor of cargo to make a signed statement of the contents
- acceptance procedures and rejection processes
- documentation requirements
- checklists
- notification to Captain (NOTOC)
- freight manifests
- retention of documentation
- segregation, storage and handling
- aircraft loading and unloading procedures, including measures to ensure that "Cargo Aircraft Only" packages of dangerous goods are not loaded onto passenger aircraft.

Responsibilities

Clear identification of the person or persons responsible for:

- keeping the Dangerous Goods Manual amended and up to date
- acquiring and distributing reference materials and documentation (Including IATA, DGRs, checklists, and signage)
- ensuring employees maintain currency in dangerous goods training and that records are up to date
- ensuring agents are trained, maintain currency in training and that records are up to date.

Reference to Requirements

The operator's Dangerous Goods Manual must include:

- a listing of the applicable Australian legislation covering consignment and carriage of dangerous goods
- a listing of the applicable technical documents relating to dangerous goods matters and their location
- an emphasis on the need to comply with the company policy and procedures detailed in the Dangerous Goods Manual.

Dangerous goods carried by passengers and crew

Information relating to dangerous goods carried by passengers and crew should:

- include the dangerous goods that passengers are permitted to carry on board, on their person, and in their checked-in baggage
- be provided to passengers at passenger check-in points, ticketing areas and baggage collection areas.

Procedures for reporting dangerous goods

The Dangerous Goods Manual must include a definition of a dangerous goods incident.

Procedures relating to dangerous goods incidents must include:

- initial action
- follow-up action
- the responsibility of employees to report.

Precautions against hidden hazards in cargo consignments and passenger's baggage

Information on potential hazards hidden in cargo consignments and passenger's goods must be provided within the Dangerous Goods Manual including:

- a list of commonly mis-declared items (may be based on experience)
- the requirements for a consignor of cargo, to make a signed statement of the contents of the cargo, and the document on which the statement should be made (this may not be applicable to foreign operators carrying cargo originating outside Australia)
- a set of procedures for ensuring the statement of contents from the consignor (the original consignor or a freight forwarder)
- the provision of information to shippers and freight forwarders about areas where cargo is lodged with the operator.

Dangerous Goods Acceptance Process

- Dangerous Goods Acceptance process
- Dangerous Goods Checklists
- Notification of Dangerous Goods To the Pilot In Command - NOTOC Process
- Dangerous Goods Hazard and Handling Labels
- Display of Dangerous Goods Information
- Dangerous Goods Storage Area.

Cargo Acceptance Process

- Cargo Acceptance Process
- Hidden Dangerous Goods
- Dangerous Goods Consignment Note Requirements.

Dangerous Goods Rejection Process

- Dangerous Goods Rejection Process
- Quarantine Area
- Labels Relevant to the Dangerous Goods Rejection Process (Hold, Accept, Reject)

Company Dangerous goods Training Policy

The Dangerous Goods Manual must make reference to the need for training. Details of the training requirements for dangerous goods handling can be found in the section on Dangerous Goods Training.

The operator's Dangerous Goods Training Policy should include:

- the training requirement
- who is to be trained, to what level and how often
- Approved Training Organisations (ATO)
- operator-specific material to be covered by employees who attend a generic external course
- recording of training qualifications
- Dangerous Goods Training Organisation and Instructor Approvals
- Dangerous Goods Training Records
- Dangerous Goods Training Certificates
- Dangerous goods training system for maintaining currency.

For more information, see section 1.7 of this chapter.

Information to Pilot-in-Command (Notification to Captain [NOTOC])

Information required by the pilot-in-command must include:

- the responsibilities of load planners
- the method of providing written advice to the pilot-in-command of dangerous goods on board the aircraft
- the responsibilities of the pilot-in-command to acknowledge the written advice
- the method of providing emergency response information to the pilot-in- command
- instructions to pilot-in-command to report details of dangerous goods carried to ATC in the event of an in-flight emergency.

Emergency Procedures

CASA recommends the Dangerous Goods Manual contains actions to be taken by employees in the event of an incident such as a spillage or leakage, before or after take-off or in-flight.

The operator must ensure that for consignments for which a dangerous goods transport document is required, appropriate information is immediately available at all times for use in emergency response to accidents and incidents involving dangerous goods in air transport. The information must be available to the pilot-in-command and can be provided by either:

- the ICAO document Emergency Response Guidance for Aircraft Incidents Involving Dangerous goods (Doc 9481)
- any other document which provides appropriate information concerning the dangerous goods on board.

Company aircraft type-specific instructions

In addition to the previous guidelines, the following company aircraft type-specific instructions are required:

- dangerous goods of the operator that may be carried
- aircraft hold diagrams location and numbering system
- stowage locations and quantities for radioactive substances including transport index limits, dry ice and magnetised material, including:
    - segregation requirements
    - operator-specific requirements considering the nature of the hazard presented by certain classes of dangerous goods and the specific aircraft configuration (For example not storing corrosives next to emergency oxygen bottles or primary control cables)
- in-flight emergency response information
- potential hazards associated with each class of dangerous goods including:
    - emergency action in the event of fire, spills or leakages
    - The responsibilities of the Pilot-In-Command to report details of dangerous goods carried to Air Traffic Control in the event of an in-flight emergency.

Provision of information

- Dangerous goods information with tickets
- Dangerous goods notices at check-in
- Dangerous goods notices at freight acceptance areas.

Dangerous goods incident reporting

- Reporting method – responsibility for reporting to Chief Pilot and CASA
- Reporting time period – considering regulation 92.065 (2) of CASR

Regulation 92.065 (2) of the CASR mandates that, if a dangerous goods incident occurs, the operator must report the incident to CASA in writing within 2 working days of the incident occurring.

Retention of records (Hard Copy or Electronically)

The following dangerous goods documentation must be retained for a period of 3 months:

- The Dangerous Goods Transport Document (DG Shippers Declaration)
- Dangerous Goods Acceptance Checklists
- Notification of Dangerous Goods to the Pilot in Command (NOTOC)

- Air Waybill and consignment notes

1.4 Technical Desktop Documentation Review

Section 28(BF) of the Civil Aviation Act 1988 requires management level oversight of the dangerous goods functions within an organisation.

The CASA Inspector will review a combination of the following documents relevant to the nature of activities to be conducted by the operator.

- Dangerous Goods Manual (CASA Form 1441 – DG Manual Evaluation)
- Any manual which contains reference to the handling, acceptance or carriage of dangerous goods and cargo which may include the:
- Operations Manual
- Training & Checking Manual
- Freight and Cargo Manuals
- Airport and Ground Handling Manuals
- Emergency Procedures Manual
- Cabin Crew Manuals.

1.5 Verification and Testing

The CASA Inspector may liaise with any of the operator's staff to verify the operator's dangerous goods procedures.

The verification will involve:

- a desktop assessment of the operators documented procedures
- inspection of the operators procedures in practice.

The purpose of the assessment is to establish that the operator can demonstrate that their processes and procedures are appropriate to the nature of the operations covered by the AOC.

The operator should review the assessment checklists within Section 1.2.5 of AOC Handbook Volume 4, as part of their own document quality assurance.

1.6 Applicable Legislation or other documents

- Section 23 of the Civil Aviation Act 1988
- Section 29 of the Civil Aviation Act 1988
- Part 92 of the Civil Aviation Safety Regulations 1998
- Regulation 215 of the Civil Aviation Regulations 1988
- ICAO Technical Instructions For The Safe Transport Of Dangerous Goods By Air
- IATA Dangerous Goods Regulations

Current legislation is available on the CASA current rules web page.

1.7 Dangerous Goods Training

1.7.1 Introduction

This section contains guidance on Dangerous Goods (DG) training and outlines the regulatory requirements for DG training for employees and the CASA approval requirements for DG courses and instructors.

This section should be read in conjunction with AC 92A-01, AC 92-01 and AC 92-03 and Part 92 of the Civil Aviation Safety Regulations 1998.

An employee is only required to undertake training which is relevant to the employee's responsibilities and duties within the organisation. The exception is under regulation 92.135 of the CASR requires that all employees on all DG courses must receive training in the provisions concerning DG carried by passengers and crew.

1.7.2 Definitions Relating to DG

Cargo does not include carry-on baggage or checked baggage.

Group A employee is an employee whose duties include accepting, or supervising someone whose duties include accepting, cargo known or believed to contain dangerous goods consigned for transport on an aircraft at any time after it leaves the custody of the original consignor.

Group B employee is an employee whose duties include accepting, or supervising someone whose duties include accepting, cargo consigned for transport on an aircraft (other than cargo known or believed to contain dangerous goods) at any time after it leaves the custody of the original consignor.

Group C employee is an employee who is a member of an aircraft's flight crew or a load planner.

Group D employee is an employee who is a member of an aircraft's cabin crew.

Group E employee is any employee of an operator, ground handling agent, freight forwarder or screening authority who is not a group A, B, C or D employee and whose duties involve handling:

- cargo consigned for transport on an aircraft at any time after it leaves the custody of the original consignor
- passengers' checked or carry-on baggage.

Group F employee is an employee of a shipper of goods whose duties include packing dangerous goods, or supervising someone else whose duties include packing dangerous goods, in the course of the goods being consigned for transport on an aircraft.

Deemed Employees are personnel of outsourced agencies that are directly performing a function for and on behalf of an operator. These personnel are deemed to be employees of the operator. The operator is responsible for ensuring that the outsourced employees are trained as Group A employees.

1.7.3 Application Forms

The following CASA forms are relevant to this activity:

Dangerous goods Training Course Approval

- Form 1536 – DG Training Course Approval Application
- Form 8881 – DG Training Course Syllabus Compliance Statement

Dangerous goods Instructor Approval

- Form 1537 – DG Instructor Approval Application

1.7.4 Responsibilities relating to DG Training

Applicant's Responsibilities

The applicant is responsible for ensuring:

- that any staff engaged in the handling or transporting of passengers or cargo have received dangerous goods training
- that dangerous goods training courses and instructors are approved by CASA where CASA approval is required
- to ensure that the DG training course meets the syllabus requirements of under regulation 92.135 of CASR
- that the course workbooks, instructor notes, exams and certificates are adequate, up to date, and functional
- In the case of distance education courses, that there are adequate safeguards for detecting and/or preventing inappropriate activities
- to ensure that any DG training received by their employees, which does not require CASA approval, meets the requirements of the syllabus and is appropriate to the duties of the employee
- to ensure that instructors are approved by CASA where required and that instructors that do not require CASA approval meet the necessary pre-requisite training in order to deliver the course (as specified in regulation 92.140 (5) of the CASR).

CASA Responsibilities

The CASA Inspector will verify that the applicant has made arrangements to ensure that any staff engaged in the handling of passengers, cargo and dangerous goods have received appropriate DG training commensurate of their duties and responsibilities.

CASA will check the process for recording and monitoring DG training, including scheduling of recertification training ahead of expiry.

CASA will assess training courses and instructors where CASA approval is required.

The CASA Inspector will assess that the course material:

- is complete
- meets the requirements of the syllabus
- is consistent with the instructor guides and student workbooks

The CASA Inspector will assess that the exams are an appropriate test of knowledge across the relevant syllabus.

For Group E employees who undertake a DG Training Course which is not a CASA approved course, the CASA Inspector will verify that the applicant has appropriate processes and procedures to indicate that these employees have received the required level of relevant training.

For instructors of Group E training courses CASA will check that instructors are appropriately trained and the processes for assessing, monitoring and recording their training are appropriate.

1.7.5 Training

Training Requirements

An operator is required to ensure employees undertake training which is relevant to their responsibilities and duties within the organisation.

The requirement for dangerous goods training is applicable to any employee of:

- a commercial (business) operator (exemptions are listed in Section 1.7.5.3)
- a ground handling agent (GHA)
- a freight forwarder (including a Regulated Air Cargo Agent or an Accredited Air Cargo Agent);

Where that employee is handling, or is involved in the handling of cargo that has been consigned for carriage on board an aircraft. This includes passenger checked or carry-on baggage.

The type and scale of training will vary depending on the type of operation proposed under the AOC and the types of dangerous goods to be carried. In general, training is required for:

- aircraft operators (including Flight Crew, Cabin Crew, Load Control/Planner, Check-In Personnel
- ground handling agent
- freight forwarders
- security screening staff
- shippers of dangerous goods.

Operators must satisfy training requirements for all staff involved in the handling of cargo, passengers or passengers' baggage, even if that operator does not carry dangerous goods as cargo. The operator is required to have a Dangerous Goods Manual, which may be incorporated within the Operations Manual.

It is not necessary for an employee to be physically handling the cargo for them to be required to undertake dangerous goods training.

Regulation 92.095 to 92.130 of CASR (inclusive) imposes training requirements upon various employer entities (see Table 3).

Table 3:

Regulation	Employer	Employee Group
92.095	Aircraft operators	Groups A, B, C, D, E
92.100	GHA	Group A, B, E
92.105	Forwarders	Group A, B, E
92.115	Screening authorities	Group E
92.120	Shippers of Dangerous Goods	Group F
92.125	Australian based employees of foreign operator	Groups A, B, C, D, E
92.130	Foreign based employees of an Australian Operator	Groups A, B, C, D, E

Exclusions

As outlined in regulation 92.095 of CASR, DG training is not required for commercial operators only involved in the following activities:

- agricultural
- horticultural
- forestry
- pollution control
- search and rescue
- balloon operations
- joy flights
- scenic flights
- flying training operations.

Exemptions

Where an employee cannot be trained in accordance with one of the legislative requirements in Table 3 then the responsible employer (not the employee) may apply to CASA for exemption under regulation 11.160 of CASR from the relevant regulation.

1.7.6 Overarching DG Training Principles

Development of a Dangerous Goods Course

Dangerous goods training must consider the applicable syllabus relevant for the employees groups. With this in mind, there are some overarching training outcomes that will always apply the training organisation. These include:

- DG familiarisation and the identification of the various classes of dangerous goods and associated potential hazards to employees and aircraft
- methods for identifying hidden or misdeclared dangerous goods and the appropriate actions for staff in these circumstances

- specific functional training for dangerous good contents, for example, Group B employees should be able to recognise a UN specification outer packaging by the markings, interpret an MSDS and determine whether the item is classified as dangerous
- safety training should include components of emergency procedures on the ground and in flight, inspection and decontamination, incident management and subsequent reporting.

Ongoing DG Training

Within two years of receiving initial training, an employee must undertake recurrent or refresher training. The refresher can be undertaken within three months of the two year anniversary. Refresher training courses are designed to renew knowledge and update employees on technical, procedural or company policy changes since the employee was previously trained. The course is also designed to identify knowledge deficiencies and rectify them if present.

In the case where the initial course required CASA approval, the refresher course will also require CASA approval.

If an employee does not undertake training within the two year interval, attendance at an initial training course is required instead of a refresher course.

Training Records

Dangerous goods training records must be kept and maintained by:

- Australian Operators with employees in Australia
- Australian Operators with Flight and Cabin Crew
- Load Planners that are employed outside Australia
- Ground Handling Agents and Freight forwarders with employees in Australia
- Screening authorities.

Employers are required to establish processes and procedures for the maintenance of records, and detail who is responsible for that maintenance. Employers must have the ability to quickly establish the training status of a group of employees at a given location.

Trainee's Records

Records are to include:

- the names of the employees who have completed the training
- the name and organisation of the person conducting the training
- reference to the training material used to meet the training requirements, such as CASA's approval instrument number (if an approved course)
- dates of training conducted.

Note: Where the 'deeming' provision under regulation 92.090 of CASR is used, the record should clearly indicate the actual date the training was conducted and the date the training is deemed to have been conducted.

The employer should retain a copy of any certificate issued to an employee that is required under regulation 92.135 (5) of CASR. Provision should be made for the issue to the employee of a copy of the certificate where the employee ceases employment.

Where the services of a freight forwarder or ground handling agent are used, then the operator should seek access or confirmation that records are being maintained and that training is being undertaken at the appropriate times (that is before starting duties of a new position and every two years thereafter).

Guidance material regarding DG training records can be found in AC 92-01.

Instructor Records

CASA recommends that training records are kept for two years as evidence that instructor standards have been assessed, maintained, remediated, improved and standardised. These records are to include:

- any peer reviews conducted
- principal instructor assessments
- standardisation meetings, including results of course enhancements and refinements.

Instructor Approval and Currency

Approval of a Dangerous Goods Instructor under regulation 92.140 of the CASR may be granted to an appropriate applicant. CASA Form 1537 – Application for approval to instruct an approved dangerous goods course, should be used after consulting AC 92-03.

Approved Dangerous Goods Training Instructors should remain current by either:

- instructing all syllabus subjects relevant to the course for which an instructor's approval is held
- satisfactorily completing a relevant approved course, as a student, within the previous two years.

Unless granted an exclusion under regulation 11.160 of CASR, instructors of courses for which an approval is not required and who do not hold an approval from CASA to instruct an approved course, should have satisfactorily completed an appropriate approved course within the two years before instructing.

Previously Trained Employees

Where operators, freight forwarders and ground handling agents take on a new employee who has completed dangerous goods training with a previous employer the employee is not required to undergo a new course of training but they must be inducted into the organisation's policies, processes and procedures.

When an operator commences operations at a new port and takes on an existing ground handling agent located there, the ground handling agent's employees need to be trained with regard to the policies, processes and procedures of the new operator.

Where a new employee has previously undertaken DG training and holds a certificate confirming that training; it is still incumbent upon the employer to ensure that the training was appropriate and CASA approved where necessary.

1.7.7 Course Approval Requirements

Regulation 92 of CASR contains two syllabi for dangerous goods training. One relates to courses requiring CASA approval. The other relates to courses that do not require CASA approval. In either event, refresher training is required within two years of attending the initial course.

Courses Requiring CASA Approval

Regulation 92.135 (1) of CASR syllabus is for those courses that are required to be approved by CASA before relevant employees undergo instruction. Instructors on these courses must also be approved by CASA.

Training courses requiring CASA approval are:

- **acceptance** - an initial course for the acceptance of dangerous goods (Group A).
- **recertification** - for the recertification of the acceptance course (Group A).
- **non-DG acceptance** - for the acceptance of non-dangerous goods (Group B)
- **flight crew and load planners** - for flight crew to understand the nature of the risks of any dangerous goods on board and procedures to be followed in the event of an incident (Group C)
- **cabin crew** - designed so that these employees are familiar with the various dangerous goods (Group D)
- **shippers** - courses for those companies that send dangerous goods (Group F)

Further explanation of the syllabi for approved dangerous goods courses is contained in Appendices A and C of AC 92-03: Dangerous Goods Training Courses and Instructors.

CASA DG Course Approval – CASA Responsibilities

The CASA Inspector will verify that:

- the standard of the course will enable an employee to carry out the assigned duties and responsibilities effectively.
- the course content offered is in accordance with the duties and responsibilities of the employees to be trained.
- that approved dangerous goods training courses are kept up to date and appropriate for use.
- that instructors maintain their skills, approvals issued by CASA.

Course content must be updated to reflect amendments to CASA legislation and ICAO TI or IATA DGR publications as they take effect. Such changes do not require further CASA approval during the validity period of the approval.

Assessment will check that systems exist to ensure that:

- training meets the requirements of the syllabus

- the training course is reviewed, maintained and kept up- to-date
- the instructor is appropriately trained and remains knowledgeable in the subject matter.

Applicant Responsibilities

It is the responsibility of the AOC applicant to ensure that the nominated instructor possesses an appropriate degree of DG knowledge, relative to the courses they will deliver; and that the nominated instructor has the ability to teach that subject.

For instructors of distance education courses, the AOC applicant is responsible to ensure that the persons nominated to prepare and deliver the course, and to supervise the course, have:

- the appropriate knowledge
- the means to maintain that knowledge
- the tools to ensure that the course continues to remain up-to-date.

Application to CASA is also required for trainee instructors who will be instructing under the supervision of an approved instructor.

Nominated Instructors

In order to be granted CASA approval, nominated instructors must have:

- experience in cargo and DG operations relevant to the level of instructor approval being applied for
- a good working knowledge of the CASA legislation and technical publications applicable to the courses being instructed
- satisfactorily completed an approved DG “acceptance” course in the previous two years, i.e. a course for Group A employees. This requirement may be waived if CASA is satisfied that the applicant has other compensating equivalent qualifications and/or experience.

While not mandatory, the instructor should have formal instructor qualifications, such as Certificate IV in Assessment and Workplace Training or Train the Trainer would be highly regarded.

Applicants may be tested on their knowledge during the initial application or ongoing CASA audits.

Trainee Instructors

Where a training organisation or an AOC operator proposes to develop a new in- house instructor, that instructor requires CASA approval before delivering instruction, even if the instruction is given under the supervision of another approved instructor.

The training organisation that is developing the trainee instructor must keep a record of the instructor’s development, the modules they have taught and post-instructional critiques. The trainee instructor’s progress records and critiques must be made available to CASA at the assessment. CASA will assess the instructor’s depth of knowledge relevant to the courses to be taught, and the trainee’s ability to teach the course material during a practical on the job training session.

CASA Approval of Instructors

Instructors who are instructing on an approved course require CASA approval. Further guidance regarding DG Instructors can be found in AC 92-03.

Instructors and persons responsible for approved courses should ensure that they apply to CASA for renewal or re-approval of the course or instructor at least 30 days before the expiry of the approval. This is to allow CASA sufficient time to consider the application and, if appropriate, issue new course or instructor approvals.

CASA does not normally notify an organisation or individual of the impending expiry of approvals.

Courses that do not require CASA Approval

Regulation 92.135 (2) of CASR contains syllabus for those courses which may be conducted for relevant employees and do not require approval from CASA. Instructors on these courses must themselves have completed satisfactorily, in the previous two years, an approved course for either Group A or Group B employees.

Outsourcing DG training

The operator must have appropriate processes and checks to ensure that the outsourced DG training complies with regulatory requirements, is approved by CASA where necessary and is appropriate for the nature of the operations covered by the AOC.

The CASA Inspector will assess that the applicant has made arrangements to ensure that the appropriate processes are in place to ensure that employees who undertake an outsourced DG training course, do an approved course, which is also relevant to their duties.

CASA will also check the systems for recording and monitoring outsourced DG training including:

- systems for ensuring training providers are approved
- system for an ensuring external course is approved and appropriate for employees
- foreign course training is appropriate.

1.7.8 Assessment of the DG Certification Application

Assessment of the systems provided by an AOC applicant in relation to the training of employees in DG handling training is conducted at the time of application.

Assessment – Document Review

Dangerous Goods Manual

Regulation 92.055 of the CASR requires that operators must ensure that employees are made aware of the content of the operator's Dangerous Goods Manual relevant to their duties before the employee first performs their duties.

Where the operator uses an external generic course provider without the course being tailored for operator specifics, then the operator will need to establish a robust mechanism to ensure

that employees are aware of the content of the company's Dangerous Goods Manual, relevant to their duties, before the employee commences those duties.

The CASA Inspector will assess whether the applicant has the appropriate policies and procedures to ensure dangerous goods training is carried out in accordance with the regulations. The assessment will include review of the following:

- the Operations Manual
- the DG manual
- electronic and/or hard copy training records
- compliance with regulatory requirements
- the organisation's systems:
  - anticipate DG training recertification and alert warnings
  - flags employees with expired (or expiring) training
  - captures all employee classifications
  - ensure employees, including deemed employees, working at baggage and cargo entry points into operation are trained
  - ensure that employees are aware of DG and Operations Manual requirements.
- all entry points for cargo, passengers and baggage have been identified
- all handling points have been identified
- outsourced training checklist
- in-house training course checklist.

2. Ground Operations

2.1 Introduction

This section details ground handling operational related matters associated with the operations of an Air Operators Certificate holder for Regular Public Transport (RPT) or Charter Operations using Australian registered aircraft.

The AOC application includes an assessment of ground handling functions to ensure the safe application, appropriate management, training, and control.

The assessment process is to ensure that the AOC applicant has the ability to conduct ground handling activities relating to aircraft safely, and within the requirements of the applicable legislation, considering the fleet and the operations proposed.

2.2 Responsibilities

2.2.1 CASA Responsibilities

The AOC applicant's ground handling assessment will be carried out by a CASA Inspector.

The CASA Inspector must be satisfied that all ground handling functions can be achieved, and that the safety of all passenger and ramp activities will be maintained during normal and emergency procedures.

2.2.2 Applicant's Responsibilities

It is the operator's responsibility to clearly state that every employee and contractor has direct responsibility of working in a safe manner and must comply with both legislative and company requirements and safe work procedures.

The CASA Inspector will verify that the AOC operator has documented processes and procedures for the safe operation of ground handling and ground handling equipment. These functions include, but are not limited to:

- passenger check-in
- passenger handling (tarmac control)
- baggage and cargo handling
- aircraft handling including servicing, towing and marshalling
- loading and unloading including ramp procedures and documentation completion
- weight & balance and load control procedures including documentation completion
- operational safety during aircraft fueling
- incident and accident reporting per SMS requirements
- Aviation Radio Operator Certificate (AROC)
- Non-technical Skills Training (NTS) – where applicable
- other associated ground based activities not otherwise mentioned

If an operator contracts the ground handling functions to an external service provider, the responsibility for legislative compliance is retained by the operator. For this purpose the

operator must demonstrate that processes are in place to effectively monitor and oversight contracted external service providers.

2.3 Assessment Checklists

CASA conducts regulatory assessments using the following checklist forms:

Assessment Checklists
Form 1449 – Aircraft Turnaround Assessment (Ground Operations)
Form 1450 – Port Assessment Documentation Review (Ground Operations)
Form 1451 – Port Inspection Interview (Ground Operations)
Form 1452 – AOC Manual Assessment (Ground Operations)
Form 1565 – Ground Operations Document Evaluation Feedback Form

2.4 Entry Control Requirements - General

CASA will ensure that the following documents, in addition to the company Operations Manual suite have been received from the applicant

- ground handling manual, or its equivalent
- aircraft loading manuals where applicable
- ground handling training syllabus
- load controller training syllabus where applicable.

Where a third party provides ground handling services the operator must also provide to CASA:

- the ground handling agreement. If using a standard ground handling agreement, then any exclusions must be listed (no commercial information required)
- the service level agreement.

2.5 Operational Personnel

Operational personnel involved in the management, supervision, training and day-to-day application of ground handling activities will be assessed by CASA Inspectors.

The operational personnel involved in ground operations are:

- operator port representative
- ground Operations
- ramp services manager
- customer services manager or equivalent
- load controllers – where applicable
- front line staff.

Where practical, the operator should appoint a manager responsible for ground operations within their organisation. A person appointed within the scope of this position should possess the required knowledge, training, skills and experience within ground operations.

2.6 Ground Operations Staff

The ground handling manual will contain a management and reporting structure that specifies reporting responsibilities.

The CASA Inspector will verify that the operator has an appropriate management structure and representatives responsible for the management of ground handling operations at each port authorised under the AOC.

The CASA Inspector will verify that the operator has provided an appropriate documented structure to provide a sufficient number of suitably qualified staff to safely carry out all ground handling operations.

2.7 Assessment – Desktop Review (Documentation Review)

2.7.1 Manuals

The CASA Project Manager will ensure that the necessary documentation including manuals has been received before allocating a CASA Inspector for the assessment,

The Operations Manual, including the Ground Handling Manual, must describe the operator's processes and procedures for undertaking ground handling operations.

The operations manual material relevant to ground handling may include:

- Ground Handling Manual – incorporating Ramp Services
- Passenger Services Manual – incorporating Customer Services
- Ground Handling Training Manual – including the training requirements for all specified Ground Service Equipment (GSE)
- Load Control Manual including Weight and Balance
- Aircraft Loading Manual
- Management Policy and Procedures Manual
- Safety Systems Manual.

It is up to the applicant to determine the layout of the manual suite, however, the specific requirements of regulation 215 of CAR with respect to completeness, accessibility, navigability, amendment and control must be assured. It is the responsibility of the applicant to ensure that all manuals are cross-referenced for consistency.

The operator must provide a contact within the operator's organisation nominated for ground handling operations both during and after assessment.

2.7.2 Ground Handling Manual

The Ground Handling Manual, while not requiring the issue of a specific approval, must be acceptable to CASA. The CASA Inspector will verify the accuracy and content of each manual and document.

The operator's manuals must contain operational policies, procedures, processes and any other necessary information and instruction for ground handling. This is to ensure the operator's ground handling staff are able to perform their duties and comply with the standards of the operator, as well as all legislative requirements to ensure the safety of air navigation.

2.7.3 Ground Handling Training Manual

CASA recommends that AOC operators develop a Ground Handling Training Manual. This manual would ensure the competency and currency of ground staff and would contain:

- the assessment
- tests and checks
- a syllabus of training and development for persons nominated as ground handling trainers
- a process for ensuring standardisation of training delivery.

The CASA Inspector will verify that the AOC operator has documented processes and procedures for the retention of training and assessment records for ground handling staff.

2.8 Verification and Testing

The CASA Inspector will verify by onsite inspection that the facilities, ground service equipment, training and contractors proposed for use by the applicant are appropriate.

The scope of the inspection is determined by factors such as the aircraft type, similarity of procedures currently in use by the AOC applicant or another Australian AOC holder, similarity of procedures for the aircraft type and whether differences or initial training is required for the staff involved.

During the site inspection, the operator will demonstrate the suitability of ground operations processes, procedures, Ground Service Equipment (GSE), document retention and provide evidence of training and assessment of ground handling staff.

Operational personnel must be able to demonstrate adequate knowledge, proficiency and competency to perform their designated duties including operation of equipment.

2.9 Applicable Legislation

- Section 28(1)(b)(ii) & (iii) Civil Aviation Act 1988
- CAR 215
- Section 82.1 of the Civil Aviation Orders
- Section 82.3 of CAO
- Section 82.5 of CAO
- Section 20.2 of CAO
- Section 20.9 of CAO
- Section 20.16.1 of CAO
- Section 20.16.2 of CAO
- Section 20.16.3 of CAO

This legislation is available at CASA current rules web page.

3. Drug and Alcohol Management Plans

3.1 Introduction

Drug and Alcohol Management Plans (DAMP) are required under Part 99 of the Civil Aviation Safety Regulations 1998 (CASR) by certain operators and other relevant organisations. Regulation 99.030 of CASR details the types of operators or organisations that must develop and maintain a DAMP. These operators or organisations are DAMP organisations if they employ or contract personnel who perform Safety Sensitive Aviation Activities (SSAA).

SSAA is defined in the Civil Aviation Act 1988 (the Act) as activities that impact directly or indirectly on the safety of:

a. civil air operations in Australian territory, or

b. the operation of Australian aircraft outside Australian territory.

Regulation 99.015 of CASR specifies the types of activities classified as SSAA.

This chapter provides guidance and an overview to DAMP organisations in regard to development and assessment of a DAMP. There are a number of CASA Exemptions that apply to Part 99 of CASR Part which include:

1. DAMP Exemption - for microbusinesses

CASA Inspectors Note: This exemption is applicable to operators with 10 or less SSAA employees or contractors not providing services to or engaged in RPT operations

2. DAMP Exemption for the collection and screening of specimens

CASA Inspectors Note: This exemption applies to testing requirements applicable to organisations outside of capital cities

3. DAMP Exemption for CAR 30 or Part 145 organisations overseas

CASA Inspectors Note: This exemption applies to a CAR 30 or Part 145 organisation with an overseas base, however, if they are operating partly inside and partly outside Australian territory they must have a DAMP for its Australian operations

4. DAMP Exemption – use of pre-hiring drug and alcohol tests
5. DAMP Exemption – Foreign aircraft AOC holders
6. DAMP exemption for reporting.

3.2 Responsibilities

3.2.1 CASA Responsibilities

CASA does not formally approve an organisation's DAMP, however regulation 99.035 of CASR requires the development and implementation of a DAMP. Regulation 99.045 of CASR details the required content and further guidance material for the development of a DAMP can be found on the CASA website under the Resources, Guidance Material, FAQ's, Tools and Forms section.

Note: More detailed guidance for implementation of a DAMP is currently under development as advisory circulars

CASA will assess the suitability of an organisation's DAMP in direct relation to the type of operations conducted by the DAMP organisation.

CASA will undertake an ongoing surveillance program to ensure the DAMP organisation is complying with relevant legislation.

The DAMP organisation's SSAA employees and contractors are also subject to drug and alcohol testing by CASA approved testers in accordance with Subpart 99.C of CASR.

3.2.2 Applicant Responsibilities

The applicant must provide the following DAMP documentation to CASA:

- the organisation's policy on drug and alcohol use
- drug and alcohol education program
- drug and alcohol testing program
- drug and alcohol response program.

In addition to the above components, the DAMP organisation has administrative obligations to ensure compliance in accordance with the following regulations of the CASR, and provide documented procedures:

- CASR 99.040 DAMP must be made available to SSAA employees
- CASR 99.080 Additional responsibilities of the individual SSAA employee, and document control
- CASR 99.085 Review of a DAMP by DAMP organisation
- CASR 99.105 Requirements for DAMP record management, including destruction or deletion of certain records

DAMP organisations are required to have a DAMP fully developed and implementation conducted prior to commencement of any SSAA.

3.2.3 Applicant's Key Personnel

DAMP Contact Officer

All DAMP Organisations must appoint a DAMP Contact Officer. The DAMP Contact Officer's primary role is to liaise with CASA in relation to the organisation's legislative responsibilities.

The organisation's DAMP must identify and provide the contact details of the DAMP contact officer.

CASA must be notified of the name and contact details of the current DAMP Contact Officer using CASA Form 008 - DAMP Organisation Contact Form.

DAMP Supervisor

Every DAMP organisation is required to train and appoint a DAMP Supervisor.

The DAMP Supervisor is trained and authorised to form an opinion regarding whether a person is affected by drugs and alcohol. The DAMP organisation must conduct drug and alcohol testing as per regulation 99.050(2) of CASR if the DAMP supervisor has reasonable grounds that a SSAA employee or contractor is affected.

The organisation's DAMP must identify and provide the contact details of the DAMP supervisor.

3.3 Documentation required as evidence of a DAMP

3.3.1 Drug and Alcohol Education Program

A Drug and Alcohol Education Program must include;

For SSAA employees:

- awareness of the organisation's policy on drug and alcohol use
- awareness of drug and alcohol testing in the workplace
- knowledge of the support and assistance services available for people who engage in problematic use of drugs and alcohol
- the potential risks to aviation safety from problematic use of drugs and alcohol

For the DAMP supervisor:

- training to identify persons affected by drugs and alcohol
- the management of people who misuse drugs and alcohol.

The DAMP organisation may develop their own education program, or use the CASA eLearning available on the CASA website.

Note: If a DAMP organisation uses the CASA eLearning, they must still provide awareness on the organisation's policy on drug and alcohol use, additional program requirements of drug and alcohol testing program, and the organisation's specific support and assistance services offered.

3.3.2 Drug and Alcohol Testing Program

A Drug and Alcohol Testing Program must include information on how testing of SSAA employees will be conducted in the case of:

- when a person first joins the organisation
- post-accident or serious incident
- reasonable grounds
- returning to SSAA after a positive test result

Note: Although not a regulatory requirement for DAMP organisations, they may include random testing as part of their drug and alcohol testing program. If this is the case then it is recommended that it be stipulated in their DAMP and be included in the DAMP education program.

As a minimum under Part 99 testing is required to meet the following standards:

- AS3547 Breath alcohol testing devices for personal use and NMI R 126, Pattern Approval Specifications for Evidential Breath Analysers
- AS4760 Procedures for specimen collection and the detection and quantitation of drugs in oral fluid
- AS/NZS4308 Procedures for specimen collection and the detection and quantitation of drugs of abuse in urine

Note: The above testing standards would not apply if the DAMP organisation adopted the CASA Exemption for the collection and screening of specimens.

The DAMP organisation must set out the details of the testing program, and it is recommended that it includes a process for sourcing an accredited person or organisation (an accredited testing service provider) for the conduct of testing if required. The CASA DAMP webpage includes guidance for DAMP organisations on how to source accredited testing providers.

Additionally, if there is a positive test, the DAMP must include the requirement that the DAMP organisation must consult a DAMP medical review officer (MRO). Guidance information regarding MRO is available under Fact Sheets on the CASA website.

3.3.3 Drug and Alcohol Response Program

The drug and alcohol response program is required if there is either:

- a positive test
- a refusal
- interference of a test.

After a positive test result under the DAMP program the initial responsibility for both the individual tested and the organisation is that they cease SSAA immediately (Regulation 99.065 of CASR). Depending on the organisation's specific policy, the individual who returned a positive test result would be required to enter the return to work program and be excluded from performing SSAA until the mandatory requirements are met (Regulation 99.070 and 99.075 of CASR).

3.3.4 The Micro-Business DAMP

An organisation of 10 or less regular SSAA employees, that is not engaged in or providing services to RPT, may be granted a CASA Exemption from the full requirements of a DAMP.

These organisations must read and understand the conditions of the DAMP Exemption for micro-businesses. They must also formally adopt CASA's micro-business DAMP and at all times comply with the terms within this DAMP.

The organisation's SSAA employees, including the micro-business DAMP supervisor, must complete the CASA eLearning.

3.4 DAMP Review

DAMP organisations must audit their programs every 5 years after the date of implementation, to ensure ongoing accuracy and relevance of their DAMP. CASA may direct changes at any other time.

4. Cabin Safety

4.1 Introduction

The purpose of the cabin safety assessment of an AOC application is to ensure that the operator is able to conduct passenger operations safely within the requirements of the Civil Aviation Act, Civil Aviation Regulations, Civil Aviation Safety Regulations and Civil Aviation Orders, considering the fleet and the operations proposed.

This section provides guidance to CASA inspectors on cabin safety related matters associated with the issue, variation or renewal of a Regular Public Transport (RPT) or Charter Air Operator's Certificate (AOC) to operate Australian aircraft.

Applicants are encouraged to consult this chapter when developing processes and procedures for inclusion in the cabin safety sections of their company Operations Manual.

Cabin safety related matters associated with the issue, variation or renewal of an AOC may include any of the following:

- operations manuals
- passenger safety related documentation
- cabin crew training and checking
- crew emergency procedures
- safety and emergency equipment
- emergency evacuation demonstrations
- port Inspections
- proving flights.

4.1.1 CASA Responsibilities

During the certification process, CASA Inspectors are responsible for ensuring all cabin safety related certification requirements are adhered to.

For applications where no cabin crew are required for the proposed operation, the CASA Inspector will assess all passenger safety requirements that require operational procedures, including:

- passenger safety information
- emergency procedures
- training and checking requirements
- aircraft emergency equipment
- operational procedures related to the carriage of passengers.

The CASA Inspector needs to be familiar with the aircraft type, certification requirements for that type and the training methodologies of the Applicant.

When recommended practices, as published by CASA, are not adopted by an operator, the operator must provide an alternate means of compliance. This alternate means of compliance must be thoroughly reviewed by the CASA Inspector to ensure that safety is not compromised.

4.1.2 Applicants Responsibilities

The Applicant must satisfy the CASA inspector that regulatory requirements applicable to cabin safety functions are met and can be practicably accomplished.

An operator must:

- establish procedures and instructions for each aircraft type; both on the ground and in flight
- include specific individual cabin crew duties for each aircraft type and variant
- provide copies of the operations manuals for the use and guidance of operations personnel
- ensure that all appropriate operational requirements are included in the training of crew members
- validate procedures through emergency evacuation demonstrations and proving flights as required.

4.1.3 Application Forms

The following is a list of application forms available for use by the operator:

Table 4: Application Forms

Application Forms
Form 623 - Application for CAO 20.11 Approved Person / Senior Instructor Nomination
Form 624 - CAO 20.11 - Application for Approval of Emergency Equipment
Form 626 - Cabin Safety - Application for CAR 256A Approval of Carriage of Animals

4.1.4 Assessment Checklists

CASA conducts regulatory assessments using the following checklist forms:

Table 5: Assessment Checklist

Assessment Checklist
Form 1428 – CAR 208 Direction
Form 1429 – Carriage of Animals Checklist (Cabin Safety)
Form 1430 – Passenger Briefings (Cabin Safety)
Form 1431 – Operations Manual Assessment (Cabin Safety)
Form 1432 – Organisation Structure & Administration (Cabin Safety)
Form 1433 – Aircraft Inspection (Cabin Safety)
Form 1434 – Training & Checking Manual (Cabin Safety)
Form 1435 – CAO 20.11 Approved Person Assessment Checklist
Form 1436 – CAO 20.11 Senior Instructor Assessment Checklist

Form 1438 – Cabin Safety Training Facilities & Mock-up Approval
Form 1439 – Cabin Safety Evacuation Demonstration
Form 1440 – Cabin Safety Proving Flight Checklist
Form 1442 – Cabin Safety MEL Checklist
Form 375 – Compliance Statement (Cabin Safety)

4.2 Air Operator Certificate Issue

During the AOC issue process the CASA Inspector is required to assist with the following:

4.2.1 Enquiry Phase

Pre-Assessment Meeting – Based on the information received from the Applicant, CASA will determine if a pre-assessment meeting is required.

The purpose of the pre-assessment meeting is to assist and advise the Applicant on developing a comprehensive application and ensure the Applicant understands the AOC issue process. The cabin safety components of the meeting agenda are detailed below.

Statement of Intent – verify and if necessary clarify contents of the original Statement of Intent i.e. the scope and nature of the proposed operation, type of aircraft, and number of crew required.

Management Structure – discuss qualifications and experience of key cabin safety personnel (however called) including:

- Cabin Crew Manager
- Cabin Crew Training & Checking Manager
- Cabin Safety Manager

Compliance Statement – provides a method for both the Applicant and CASA to ensure that their obligations under the Act are completely discharged and the Applicant should:

- follow the format outlined in the AOC Handbook, Volume 2, Section 4
- next to each item – provide a reference to a specific section of their operations manual that describes a means of compliance with legislation.
- provide a brief statement indicating his or her intent, if the method of compliance has not been fully developed
- have a clear understanding of the legislative requirements applicable to the proposed operation regarding the cabin safety components of the compliance statement

Assessment and Certification Process – describe to the Applicant the cabin safety components of the assessment process and use of forms and checklists when evaluating:

- organisation structure, duties and responsibilities
- facilities
- operations manuals
- training and checking

- evacuation demonstrations
- proving flights

Protocols and Contact Personnel – identify the person within the Applicants organisation who is completing the cabin safety components of the application, and obtain the relevant contact details.

4.2.2 Application Phase

During the application phase, the Applicant must submit documentation including manuals and other information. This is covered in the AOC Handbook, Volume 1. The CASA Inspector should review all supporting documentation relevant to cabin safety.

Project Plan

The CASA Inspector will verify that the following timelines are achievable, considering:

- complete review of the operations manuals
- cabin safety documentation including passenger safety cards
- training organisation and facilities ready for inspection
- dates of training programs and assessment of personnel nominated for CAO 20.11 approvals to conduct proficiency tests
- evacuation demonstration
- proving flights.

Compliance Statement

The CASA Inspector will assess the compliance statement in conjunction with the operations manual to ensure the Applicant has met the cabin safety requirements applicable by legislation. Refer to Compliance Statement – AOC Handbook, Volume 2, Section 4.

It is recommended that the following checklist is used to ensure adequate assessment of cabin safety components:

CASA Form 1568 - Cabin Safety Checklist - Compliance Statement.

Organisational Structure and Lines of Communication

An application for an AOC must contain a description of the proposed management structure and the associated duty statements of personnel. It must contain adequate information about the qualifications and experience of the following key personnel as defined in subsection 28(3) of the Act for:

- the Chief Executive Officer
- the Head of Flying Operations (Chief Pilot)
- the Head of Airworthiness and Maintenance Control (HAAMC)
- the Head of Training and Checking (HT&C)
- any other position prescribed by the regulations, for example Chief Flying Instructor.

The Applicant is not obliged to use these titles but, if different, they should identify which titles are equivalent to the ones listed above.

The CASA Inspector will verify that the qualifications and experience of the Applicant's key personnel are appropriate and comply with the requirements outlined in the relevant sections of the AOC Handbook. The expected level of qualifications and experience will vary according to the scope and nature of the proposed operations.

Responsibilities – The Head of Training and Checking (HT&C) is a key position and is responsible for aircrew training associated with regulation 217 of CAR, regulation 253 of CAR, Section 82 of CAO and Section 20.11 of CAO. CASA is responsible for the approval of the nominated HT&C. Regulation 217 of CAR responsibilities delegated to cabin safety personnel come within the scope of cabin safety. If contracted training personnel or facilities are to be used, responsibility for aircrew training standards remains with the Applicant's HT&C.

The management structure and operational interface of the cabin crew department must be included in the relative section of the company operations manual for review. Should certain cabin crew management positions report to AOC responsible persons, these delegated responsibilities should be clearly defined in position descriptions within the AOC and regulation 217 of CAR organisational charts as applicable. Changes to key positions within the operator's organisation must be advised to CASA.

The following checklist can be used to guide the assessment of cabin safety components of the organisational structure:

CASA Form 1432 - Organisation Structure & Administration (Cabin Safety).

Manuals

Section 27AB of the Act details general requirements applicable to the submission of manuals by the Applicant. Manuals that must be lodged include:

- flight manuals
- company operations manuals
- training and checking manual.

The following form can be used to guide the assessment of cabin safety components of the operations manual:

CASA Form 1431 – Operations Manual Assessment (Cabin Safety).

4.2.3 Assessment Phase

The purpose of the assessment phase is to establish whether the operations proposed in the application meet the safety and regulatory requirements for an issue of an AOC, and verify the evidence provided by the Applicant to support their application.

This includes but is not limited to:

- the suitability of the organisation to safely conduct the activities authorised by the AOC
- the qualifications and competence of its personnel
- sufficient facilities

- suitability of procedures and practices to control the organisation to enable the AOC operations to be conducted safely.

Formal Application Meeting

The CASA Project Manager will determine whether a formal application meeting is required. The formal application meeting provides the project team with an opportunity to discuss the formal application in detail with the Applicant's key personnel on matters including:

- the project plan
- suitability of the manuals
- the compliance statement
- qualifications of personnel
- the documents providing evidence of aircraft, facilities and services.

Technical Documentation Assessment

The purpose of the cabin safety documentation assessment is to assess if:

- the cabin safety documentation submitted to support the application addresses all items necessary to ensure cabin operations can be conducted safely
- the Applicant's cabin safety personnel have the appropriate qualifications, history and capability to perform the cabin safety tasks outlined in the Operations Manual.

Further reference can be found in Technical Documentation Assessment – AOC Handbook, Volume 1, Section 4.6.1

Manuals relevant to cabin safety may include:

- Aircraft Flight Manual
- Flight Operations Manual
- Air Crew Emergency Procedures Manual
- Cabin Crew Policy and Procedures Manual
- Training and Checking Manual
- Ground Handling Manual
- Dangerous Goods Manual
- Safety Management Systems Manual
- Drug and Alcohol Management Plan.

General requirements include:

- all required manuals and the compliance statement will be checked for suitability and completeness
- an operator must have a form of document control; that is all manuals must be issued as controlled and numbered publications with a full amendment service
- a system should be in place to ensure information common to several publications is amended at the same time
- the manuals must be written using clear and unambiguous English text and graphics

- common information published in more than one manual should be cross-referenced for consistency to ensure that the same standards and procedures apply at all points of a process
- the amendment process should be sufficient to manage information distributed via electronic means for example intranet
- certified data should be correctly referenced as the master document; such information may be amplified
- due consideration should be given to manufacturers recommendations and these should not normally be changed without appropriate justification.

Additional guidance can be found: CAAP 215-1 (2) - Guide to the preparation of operations manuals.

Cabin Safety Personnel Review

The CASA Inspector will review the qualification, history and capability of cabin safety management personnel to ensure compliance with part 82 of CAO.

CASA Inspectors must liaise with the applicant to address any deficiencies that have been found. Deficiencies must be communicated to the applicant in writing.

The following form can be used to guide the assessment of cabin safety components of the training & checking manual:

CASA Form 1434 – Training & Checking Manual (Cabin Safety).

4.2.4 Verification and Testing

Under paragraph 28(1)(b) of the Act, an applicant must, in part, satisfy CASA that:

- operations can be conducted safely having regard to the nature of the AOC operations
- the organisation's chain of command is appropriate
- key personnel have appropriate experience in air operations
- the organisation has a sufficient number of suitably qualified and competent employees
- the facilities are suitable
- the organisation has suitable procedures and practices

The verification and testing phase serves two functions:

- to establish that the Operations Manual has been designed to provide compliance with the legislative requirement for the issue of an AOC
- to provide justification for the granting of other specific approvals related to the AOC including part 20.11 of CAO approval to conduct proficiency tests

The verification and testing phase is accomplished by the evaluating manuals, inspections, and through practical exercises such as proving flights. It is important to ensure that the assessment is made against standards and procedures specified in the applicants operations manual, rather than base legislative provisions.

In most cases, consideration of matters during the verification and testing phase will require a joint assessment by a multi-disciplinary team.

Organisational Structure and Staffing

The applicant must satisfy CASA that sufficient numbers of qualified personnel are employed full time in appropriate areas. In determining what constitutes 'sufficient', the project team must assess the amount of work to be performed against the reasonable capabilities of the assigned staff.

An applicant may wish to contract out some of the work involved in their operation, such as training cabin crew. The specifics of those contract arrangements will need to be assessed as they relate to the AOC application and requirements. Furthermore, any person or organisation providing operational services will require inspection to verify they are providing those services in accordance with processes and procedures as detailed in the applicant's operations manual.

The following form can be used to record the assessment of organisational structure, staffing, facilities and control of operational documentation:

CASA Form 1432 – Organisation Structure & Administration (Cabin Safety).

Detailed requirements for facilities, staff and equipment are set out in Part 82 of CAO:

- Section 82.1 of CAO – Conditions on Air Operators Certificates Authorising Charter Operations
- Section 82.3 of CAO – Conditions on Air Operators' Certificates Authorising Regular Public Transport Operations in Other Than High Capacity Aircraft
- Section 82.5 of CAO – Conditions on Air Operators' Certificates Authorising Regular Public Transport Operations in High Capacity Aircraft.

Administration Facilities

The applicant must ensure that, administratively, the cabin safety facility meets the following criteria:

- it is an integral part of the organisation's operational headquarters and that CASA can communicate, with nominated personnel responsible for this facility
- the buildings maintained as administrative facilities must be suitable for the purpose
- administrative staff, office equipment and associated resources must be sufficient to ensure that operational instructions and information can be produced and circulated. In all cases, information related to aviation safety is to be made available not later than the effective date of that information to ensure aviation safety is not compromised.

Recording Systems

The CASA Inspectors will confirm that the operator is aware of the quantity and scope of records relating to cabin safety. Some records may require daily updating and continuous access.

Crew training and qualification records for each individual crew member must be available for the whole time that the crew member is employed by the operator and contain, for example:

- name, staff number and date of joining the organisation
- record of all training completed, including name of the course, dates of each course, results of all theoretical and practical assessments (including any failures) and the name and signature of the part 20.11 of CAO approved instructor (if applicable).

Crew Facilities and Communication with the Company

Safety considerations require that efficient and reliable communications between the operator and cabin crew can be established for the transmission of urgent operational messages.

The operator must demonstrate to the CASA Inspector a method of providing cabin crew with amendments, document revisions and operational notices in an appropriate and timely manner.

Control of Operational Documentation

Subsection 28BH of the Act makes the operator responsible for controlling the issue and amendment of the operations manuals and other operational documents issued to cabin crew and other personnel.

Copies of operational documentation held in a library or unassigned copies on-board the aircraft must also be controlled.

Subsection 28BH and Part 82 of CAO requires the holder of an AOC to maintain a reference library within the organisation, readily available to operating crews. It follows that operators will need to maintain a reference library at each port where the crew are based.

The CASA Inspector will need to review the document control system and reference library for compliance.

Passenger Handling and Public Safety

Requirements for the safe carriage of passengers are provided in Section 20.11 of CAO and Section 20.16 of CAO. Additionally if directed by CASA, regulation 221 of CAR requires that the Applicant provide facilities and safety devices for the protection of the public at aerodromes intended for use by the Applicant.

CASA Inspectors should consider:

- protection of passengers and public from jet blast, rotating propellers, moving aircraft and moving vehicles and equipment
- safety of passengers loading devices such as stairs
- fueling procedures.

It is desirable that a check of these facilities is also conducted at night. Further references: AOC Handbook, Volume 4, Section 2 – Ground Operations.

Inspection of Aircraft

Aircraft inspections may be carried out any time prior to the issue of the AOC. The following should be considered by the CASA Inspector when planning the inspections:

- inspections of aircraft fleet, including variances as documented in the Operational Manual
- all aircraft doors and exits should be inspected against their description and operation instructions found in the Operations Manual
- all emergency equipment must be checked for correct type, security and location against their description in the Operations Manual
- ensure the location of equipment, cabin crew jump seats and other furnishings are such that the cabin remains in compliance. For example, from a seated position in a cabin crew jump seat, a clear view of the aisle should be possible and access to emergency equipment cannot be hindered by passenger or crew baggage or galley supplies
- the proving flight must not take place until the particular aircraft has passed inspection.

The following form can be used to guide the assessment of cabin safety components of the aircraft inspection:


CASA Form 1433 – Aircraft Inspection (Cabin Safety).

Training and Checking Organisation

A coordinated approach to the verification and testing functions related to the Applicants Training and Checking Organisation is required. Some regulatory requirements are relevant to all operating crew, and are reviewed by multi-disciplinary teams.

A CAR 217 training and checking organisation must be approved by CASA and is required by:

- an RPT operator
- a charter operator with Approved Single Engine Turbine Powered Aircraft (ASETPA) approval
- an AOC holder operating an aircraft with a maximum take-off weight exceeding 5700kg
- any other AOC holder that CASA specifies, including specific helicopter operations.

CASA must be satisfied that the AOC Applicant's proposed organisational structure, staffing and procedures are adequate to control the AOC applicant's training, competency and proficiency programs to achieve appropriate standards and the safe conduct of operations.

The applicant will submit written procedures (the Training and Checking Manual) to provide CASA with information to determine if the AOC applicant can meet all legislative obligations for the issue of an approval of a Training and Checking Organisation.

Training and Checking Manual

The Training and Checking Manual is developed by the Applicant to outline their procedures and give guidance to all personnel involved in the training and checking organisation. The manual must contain such information, procedures and instructions with respect to the safe operation of all aircraft types operated by the AOC applicant.

The degree and scope of instruction that is outlined in the manual will depend on the number of aircraft, size, complexity and composition of the organisation. The manual can form part of the AOC applicant's Operations Manual or be a separate manual.

For operations conducted in accordance with Sections 82.1 and 82.3 of the CAO, the Training and Checking Manual will be assessed by a CASA Inspector for its suitability given the nature of the operation. For operations conducted in accordance with Section 82.5 of the CAO, an instrument of approval is required for the material contained in the applicant's Training and Checking Manual.

The acceptance and approval of a Training and Checking Manual includes the amendment and revision procedures for the manual and the system for obtaining CASA acceptance or approval before varying parts of the manual.

Training and checking of aircrew must not commence until the Operations Manual parts and training programs have received written conditional acceptance or approval by CASA as appropriate.

Section 27AB of the Act requires the AOC applicant to provide CASA with a copy of the Training and Checking Manual. An AOC operator must ensure copies of the Training and Checking Manual are available to all operating crew members and all personnel assigned training and checking duties.

A CASA Inspector will verify that the cabin safety functions of the training and checking organisation are contained in the manual and include the requirements outlined in Appendix 2 of Sections 82.1, 82.3 and 82.5 of the CAO as applicable. The Inspector will assess any additional material or information required by CASA or the AOC operator that is included in the manual. The syllabus for all training programs must be assessed for completeness and adherence to minimum regulatory requirements and the safety and emergency procedures documented in the Applicants Operations Manual.

The methods by which individual proficiency will be assessed in accordance with CAR 217 and CAO 20.11 needs to be documented. It is recommended that documentation addressing the required competencies and assessment criteria for checks be included to ensure standardisation.

The manual must also address the qualifications, training and standardisation requirements of its training and checking personnel. For all positions that form part of the operators training and checking organisation structure, the following applies:

- The selection criteria
- Minimum experience requirements
- Standardised instructional and assessment procedures and techniques
- A method to ensure standardisation of training and checking personnel
- Role distinction between training operations and checking operations.

The following form can be used to guide the assessment of cabin safety components of the training and checking manual inspection:

CASA Form 1434 –Training & Checking Manual (Cabin Safety).

Key Personnel

The Key Personnel described in section 28 of the Act involved in the training and checking organisation are:

- Head of Flying Operations/Chief Pilot
- Head of Training and Checking.

Additional staff not defined as “Key Personnel”, but those involved in the training and checking organisation are:

- Check Pilots
- Training Pilots
- Ground Instructors
- Cabin Crew Checkers
- Cabin Crew Trainers
- CAO 20.11 emergency procedures instructors
- Third party providers.

The CASA Inspector must be satisfied with the competence, qualifications and experience of the training and checking personnel assigned duties in relation to CAO part 20.11 and cabin crew training and checking programs.

The CASA Inspector must ensure the information in the Applicant’s training and checking manual adequately describes the position and lines of reporting within the CAR 217 organisation.

An organisation must have training and checking personnel with the ability to provide training and checks of competency. If a person is employed under contract as required under paragraph 2.4 of Section 82.5 of the CAO, the Applicant must ensure:

- they define the hours and duties to be carried out by that person
- the person is responsible to the operator for the manner in which his or her duties are carried out
- the person is not required to carry out duties other than those assigned by the operator, except that the person may compile and complete such reports relating to the conduct of the contract as the contracting organisation may reasonably require.

Training

Operators must establish, to the satisfaction of CASA, the minimum number of cabin crew required for each type of aircraft they operate in order to enable a safe and timely evacuation of the aircraft and other necessary functions to be performed in an emergency.

The primary duties and responsibilities of cabin crew within flight operations are safety-related and their training should clearly reflect this fact. An operator must establish and maintain a training program, approved by CASA, to be completed by all persons before being assigned as a cabin crew.

The CASA Inspector will verify that the training and checking manual includes the following information in relation to each training program cabin crew undertake:

- course outline
- detailed syllabus
- completion standards
- specimen record forms
- training checklists
- minimum crew qualifications for specified types of training

- prescribed methods of conducting training including technique and standard to be achieved, common faults and method of simulating emergencies
- the procedure to be followed when a satisfactory standard is not achieved.

Cabin Crew Training Programs include:

- initial training – for persons who have not previously been employed by the operator as cabin crew
- familiarisation training – involves new entrant cabin crew participating in both an aircraft visit and familiarisation flights
- line indoctrination – on line training conducted immediately following initial training
- conversion or differences training – includes aircraft type training required in order to qualify and maintain qualification on each type of aircraft to which the crew member will be assigned to duty
- recurrent training – required by regulatory provisions to be performed each 12 month period following initial or previous recurrent training
- refresher training – conducted when cabin crew have been absent from flying duties
- senior cabin crew training – for cabin crew appointed to positions requiring additional skills.

AOC Handbook, Volume 4, Section 4.4.2 Training and Checking Manual, contains more specific guidance in relation to cabin crew training, with suggested syllabus requirements.

Tests and Checks

CAR 217 requires the operator to ensure that the training and checking organisation includes provision for conducting two checks in each calendar year, but not at intervals of less than four months of a nature sufficient to test the competency of each operating crew member. CASA has issued Aviation Ruling 4/2004 which interprets calendar year as a rolling year.

The CASA Inspector will assess the structure of the tests and checks documented in the training and checking manual to ensure that the operator's program achieves, as a minimum, the CAR 217 requirement. This assessment forms part of the approval process for the training and checking organisation.

- **Proficiency Checks**– the process implemented by operators to assess cabin crew proficiency in accordance with CAR 217 varies. From a regulatory perspective, the major function of cabin crew is to ensure passenger safety by preventing and managing adverse situations that may develop in the aircraft cabin, and to provide guidance to all persons on board during an emergency. The CASA Inspector should consider all of the safety duties and functions cabin crew that are assigned, when assessing the structure of the proficiency check proposed.
- **CAO 20.11 Proficiency Test** – CAO 20.11 states that a crew member shall not be assigned or accept assignment to emergency duties in an aircraft unless they have undertaken and passed the proficiency test specified in Appendix IV on that type of aircraft. CAO 20.11 requirements apply to pilots and cabin crew, and the management of this function is often delegated to the person responsible for cabin crew training and checking. The CASA Inspector may need to review sections of the Flying Operations manuals to ensure the requirements are met. The proficiency test

shall cover all of those emergency procedures the crew member may be called on to perform and include at least the areas detailed in CAO 20.11 Appendix IV. It is recommended that the CAO 20.11 related component of the initial training for crew be given a final assessment during practical delivery.

AOC Handbook, Volume 4, Section 4.4.2 Training and Checking Manual contains specific guidance in relation to crew tests and checks required by CAR 217 and CAO 20.11.

Approval of Persons to Conduct CAO 20.11 Proficiency Tests

CAO 20.11 requires the proficiency test to be conducted by CASA, a person approved by CASA for the purpose, or the person appointed as Chief Pilot by the operator of the aircraft.

Where the operator nominates a person for approval, the Chief Pilot or HT&C must complete the appropriate form and submit to CASA once satisfied that the instructor is appropriately developed and competent in company requirements. CASA Inspectors may supervise candidates under assessment during an initial course as it is important to observe an active real time class using all proposed facilities during these initial assessments.

Where an operator's approved person is not available, the CASA Inspector may supervise the course delivery, proficiency tests and sign the Section 20.11 (12.4) proficiency certificates as applicable. CAO 20.11 approved person assessments that are required, following the issue of an AOC, should be applied for and assessed in a similar manner. When considering the scope of the assessment, the CASA Inspector will consider where the most assessment value lies, considering the maturity of the training and checking system, compliance history and internal quality assurance performance.

The following forms can be used to guide the assessment of cabin safety components of the approved person checklist inspection, and nomination of Senior Instructor:

CASA Form 1435 - CAO 20.11 Approved Person Assessment Checklist (Cabin Safety)

CASA Form 623 – Application for CAO 20.11 Approved Person Nomination /Senior Instructor

Where the Chief Pilot is to conduct CAO 20.11 approvals, it is recommended that a CASA Inspector observe the Chief Pilot carrying out proficiency tests with aircrew to verify that the procedures and processes used follow those documented in the Training and Checking Manual.

A CAO 20.11 Senior Instructor can be approved by CASA to undertake assessment functions of a 20.11 approved person, however, this would not be considered in an initial AOC Application. Further details in relation to a Senior Instructor approval are detailed in Section 4.4.2 Training and Checking Manual.

Facilities

Section 82 of CAO states that each operator must provide facilities, equipment and training aids to meet the requirements of each training program. This includes a facility suitably equipped for the periodic demonstration of proficiency in emergency procedures required by CAO 20.11 and must make available such items of emergency equipment as may be necessary.

Classroom facilities

The CASA Inspector will verify that the following requirements are met:

- comfortable climate
- adequate lighting level for work or viewing
- distracting sound must be kept to a minimum
- comfortable work stations
- adequate work space
- adequate training equipment
- multimedia must be fit for purpose.

In assessing the classroom facilities for the training of crew, CASA Inspectors should take into consideration the following:

- number of trainees in a class
- trainee work station size
- classroom configuration
- use of media.

It is recommended an additional classroom be set up as an emergency and survival procedure lecture room. It should be furnished with a display of all pieces of emergency equipment used on the operator's aircraft. It is useful to have enlarged samples of emergency procedure drill cards on permanent display on walls, as well as aircraft diagrams pinpointing the location of each piece of emergency equipment.

Equipment and Mock-ups

Real equipment is preferred where the operation of the equipment must be well practiced and free of error, for safety and operational reasons. Where this is not possible, mock-ups and training equipment capable of simulating realistic emergency situations may be acceptable.

For training to be effective, the operator is encouraged to use at least one realistic (essentially similar) life-size scale mock-up of the aircraft fuselage. Ideally, this would include the galleys and the cabin with a layout of equipment, switch panels, exit and window arrangements, each type of door and emergency exit that are used in the aircraft, communications systems, fire extinguishers, lavatories, overhead bins, and slides, to enable realistic simulation of cabin crew duties without continuous need for use of actual aircraft.

In all cases, the type of operational dials, handles, restraint brackets and switches that would be operated should be identical to those found on the aircraft. The force required for their operation should also be the same as that required for operating the actual aircraft part and the weight of emergency exit panels should be the same as those of the actual aircraft.

If possible, emergency equipment should be stowed in the same location and secured with the same brackets or mounting devices as in the actual aircraft and where they are easily accessible from cabin crew stations.

If special training mock-ups or equipment are not readily available, practical training and hands-on drills can be performed on board the actual aircraft where a program to accommodate such training is arranged. A change in normal class-time or a change in training location may be necessary depending on availability. Lack of equipment or the inconvenience

of getting access to an aircraft must never be accepted as a reason for the showing of videos or classroom theoretical explanations as a substitute to actual hands-on practical training.

The following form can be used to guide the assessment of cabin safety components of the training facilities and mock-up assessment:

CASA Form 1438 – Cabin Safety Training Facilities & Mock-up Approval

Approval of Mock-ups

Realistic mock-ups of emergency equipment are subject to the approval of CASA. Approval is contingent on the device being suitable for the related components of the training program, and sufficiently compatible with the actual equipment to achieve testing outcomes.

The operator must complete Form 1438 detailing the mock-ups proposed for use and submit it to CASA so that an assessment can be made. In completing the assessment, the CASA Inspector will ensure that all requirements of CAO 20.11 Appendix IV paragraphs 1.5 and 1.6 (as appropriate) have been met. This may require the submission of additional items such as pictorial presentations.

The operator must apply to CASA detailing the mock-ups proposed for use, and submit it to CASA so that an assessment can be made. In completing the assessment, the CASA Inspector will ensure that all requirements of CAO 20.11 Appendix IV para 1.5 and 1.6 (as appropriate) have been met, considering:

- where the operator identifies issues with excessive maintenance, the operator must include evidence to support the application together with details of the group demonstration, supporting pictorial presentation and related processes to assess individual proficiency
- where the operator identifies issues with the emergency mechanism causing damage to the aircraft or equipment, or being a hazard to personnel, the operator must include evidence to support the application together with the supporting pictorial or simulated presentation and related processes to assess individual proficiency.

In some areas of the application, reference to the applicable part of the Training and Checking Manual may suffice.

The following form can be used to apply for approval of emergency equipment:

CASA Form 624 – CAO 20.11 Application for Approval of Emergency Equipment

Where an operator arranges to use mock-ups owned by another organisation, the training must comply with the approved training program and operating procedures of the operator whose crews are being trained. Any variances in items or equipment in the mock-up must be restricted if significant differences exist. Supplemental training may be provided to address identified differences.

In assessing the suitability of the mock-ups, the following factors will be considered:

- aircraft types are accurately represented
- operation and appearance reflects actual equipment/device
- capable of normal and emergency operation
- capable of withstanding a higher frequency of use associated with training

- supplemental training used to address variances.

Records

It is recommended that training and proficiency records be reviewed at this time for completeness and accuracy, including using a database or other means that is suitable for the proposed size of the operation to monitor expiry dates.

Evacuation Demonstrations

In accordance with paragraph 15.1.3 of CAO 20.11, an operator must not operate a type and model of aircraft, unless they have satisfied CASA the evacuation procedures and training used by the operator, will enable crew members to achieve an evacuation capability equivalent to that achieved when the type and model of aircraft satisfies the requirements of FAR 25.803 (US Federal Aviation Regulations 25.803), or other requirements accepted by CASA in accordance with paragraph 15.1.2 of 20.11 of CAO.

Paragraph 15 of CAO 20.11 (15) O, applies to an operator of aircraft having a seating capacity of more than 44 passengers that is to be used in passenger carrying operations when:

- first introduced, by an operator of that type and model of aircraft, into passenger carrying operations
- increasing the passenger seating capacity by more than 5per cent of the that type and model, provided the operator's emergency evacuation procedures for that type and model of aircraft, have previously been accepted by CASA as satisfactory
- there is a major change in the passenger cabin interior configuration that will affect the emergency evacuation of passengers.

In accordance with paragraph 15.1.4 of CAO 20.11, paragraph O, CASA may require the operator to demonstrate, under simulated emergency conditions, an evacuation of all, or part, of the full seating capacity. This will include the number of crew members required for the aircraft, in accordance with any conditions considered necessary.

A full emergency evacuation demonstration is necessary only on the introduction of a new aircraft type manufactured in Australia, or on the introduction of a new type to the Australian Register where satisfactory evidence is not available to validate an acceptable demonstration conducted elsewhere.

If an operator makes application to CASA for a direction under regulation 208 of CAR to vary the cabin crew to passenger ratio from that specified in paragraph 6 of CAO 20.16.3 s, an evacuation demonstration may be required in assessing that application.

Purpose and Considerations

An evacuation demonstration undertaken as part of an AOC application must confirm the cabin crew training and emergency evacuation procedures together with the particular aircraft seating arrangements permit replication of the result achieved at the original certification demonstration or other acceptable demonstration. The aircraft manufacturer will already have proven the aircraft type had sufficient egress areas and escape slides to enable evacuation of all occupants within the prescribed limits at the original certification demonstration.

The aircraft's original type certification data and evacuation demonstration (or analysis) should be used as a benchmark for planning evacuation procedures. The applicant should supply

suitable evidence of the original certification demonstration including the recorded times to open each exit.

A demonstration can take varying forms depending on the elements to be proved. The need to conduct full-scale or partial demonstrations depends primarily upon whether a full-scale demonstration has been previously accomplished by another operator or the manufacturer. A partial demonstration can be achieved with a representative number of passengers. For large aircraft with multiple passenger compartments consideration may be given to a demonstration in only the most demanding compartment.

For either case, these demonstrations specifically test the following areas:

- the operator's emergency training program and crew member competency
- the operator's emergency evacuation and ditching procedures
- the reliability and capability of the emergency equipment on the aircraft.

The demonstration will involve:

- conducting the demonstration with or without passenger participants using the operators line operating procedures
- opening the exits, as selected by CASA, and deploying the slides if applicable (or approved simulation), so that the exits and slides are ready for use within the stipulated time frame
- using the operators cabin crew who have completed the approved training program for the type and model of aircraft being demonstrated
- opening a minimum of 50 per cent of the required floor-level and non-floor level exits.

Valuable lessons can be learned from these demonstrations and the applicant is encouraged to view and undertake demonstrations objectively, and apply the demonstration evidence as a basis for continuing training outcomes.

The applicant and CASA will consider efficient use of resources, risk of damage to the aircraft and injury to the participants in managing the evacuation demonstration process.

Planning and Conduct

After consultation with the CASA project team, a demonstration plan of the evacuation demonstration is required by the applicant. The provision and conduct of the demonstration is the applicant's responsibility incorporating both making arrangements and providing facilities

The demonstration plan is to provide clarity around the scope and it is recommended the following points are considered:

- **Location** - most demonstrations are best conducted in a hangar. Since the demonstration is conducted in darkness. It is recommended adequate lighting be available, which can be switched on and off during the demonstration.
- **Safe means of egress** - all aircraft main and emergency exits on both sides of the aircraft being used for the demonstration should be fitted with a safe means of egress for participants.
- **Escape slides** – if they are to be used, appropriate safety precautions should be in place to prevent injuries to participants

- **Exit indicators** - an external means to identify whether an exit is usable needs to be acceptable to CASA. The mechanism will need to accommodate random selection by the CASA team just before the start of the demonstration.
- **Crew** - The crew should comprise of regularly scheduled line flight and cabin crew.
- **Ground support and safety staff** - an appropriate number of ground support and safety staff are to be provided to assist persons exiting from the aircraft prevent damage to emergency exits and injury to participants.
- **Passengers** – the group of passengers participating should consist of an acceptable cross section of ages and genders, and should not include company employees who are involved in any part of the Applicant's operations departments. CASA is to be satisfied with the composition of the passenger load.
- **Exits** - not more than 50 per cent of the aircraft's emergency exits are to be used for the demonstration. The exits must be representative of all the emergency exits on the aircraft and at least one exit being a floor level exit. Exits not nominated for use in the demonstration will be indicated by an accepted means outside the exits to simulate fire or similar conditions that render them unusable.

The CASA Inspector will verify that the applicant has complied with the following conditions:

- no crew member or passenger should have participated in an emergency evacuation demonstration within the preceding 6 months
- no crew member, or passenger, has been given prior knowledge of which emergency exits will be available for the demonstration
- the operator has not rehearsed the demonstration for the participants or informed the crew or passengers of the specific nature of the exercise except that they may be advised they will be participating in a demonstration of safety procedures
- passengers will not be assigned to specified seats but CASA may require that passengers be assigned to particular seats
- all emergency equipment should be installed as for a normal flight
- each external door and exit, and each internal door or curtain, should be in position as it would for normal flight
- each crew member should be in their normally assigned seat, at the start of the evacuation and remain seated until the signal to evacuate is given
- all occupants will have their seatbelts and shoulder harnesses (where fitted) fastened at the time of the simulated impact
- to prevent disclosure of the emergency exits to be used, a mechanism will be agreed by which both the applicant and CASA is able to ensure the integrity of the demonstration. Examples may include all passenger and flight deck windows obscured or the provision of ramps or stands with stairs (or similar devices) to be placed at emergency exit positions in equal number on each side of the aircraft.

The CASA inspection team will supply observers both inside and outside the aircraft. There should be a nominated team leader to initiate and control the conduct of the demonstration. The team leader, who is outside the aircraft, will require direct voice communication with the participating flight crew in order to initiate the demonstration and to stop proceedings if participants become exposed to any risk of injury.

There must be at least one observer equipped with a stopwatch at each pair of exits. Timing for the demonstration will begin on activation of the aircraft emergency lighting or at the end of the evacuation signal. The timing will conclude when the last crew member leaves the aircraft, or in the case of a partial evacuation demonstration when the exit is ready for use.

There may be mutually agreed processes which are similar to those mentioned above and which will result in the same outcome of measuring the effectiveness of the evacuation procedures.

Evaluation

Criteria that measure the effectiveness of crew procedures and training include the following:

- time to open doors and emergency exits
- compliance with individual crew procedures documented in the operations manual.
- for a cabin layout that is different to the layout in the manufacturer's original demonstration or where changes have been made to the available exits, greater consideration may be given to the time taken to evacuate a nominal passenger load.

The emergency evacuation requirements will be finalised at the completion of the demonstration. If satisfied that the emergency evacuation procedures are proven to be acceptable, the applicant should apply to CASA for paragraph 15 of CAO 20.11 acceptance at the completion of the demonstration.

Ditching Demonstrations

Where life rafts are required under paragraph 5 of CAO 20.11, the operator must, unless specifically exempted by CASA, show that the ditching procedures allow for the removal of the rafts and the evacuation of the occupants from the aircraft in an orderly and timely manner. The exits that are selected for the demonstration will have to be approved by CASA.

The criteria for a ditching demonstration are detailed in CAO 20.11, Appendix II. CASA may grant an exemption to this requirement. In considering whether to exempt an operator, CASA will take into account:

- the availability and realism of training equipment
- ditching demonstrations carried out by the operator on similar aircraft types
- other such factors as they may consider relevant.

The following forms can be used to guide the assessment of cabin safety components of the cabin safety evacuation demonstration:

CASA Form 1439 – Cabin Safety Evacuation Demonstration

CASA Form 1428 – CAR 208 Direction

Assessment of the number of Operating Cabin Attendants (CAR 208) Direction

Under CAR 208, CASA may give directions as to the operating crew required to be carried on an aircraft having regard to the safety of air navigation.

CAO 20.16.3, subparagraph 6.1 (b) states:

> aircraft carrying more than thirty six (36) and not more than two hundred and sixteen (216) passengers must carry a cabin attendant for each unit of thirty six (36) passengers or part thereof.

CAO 20.16.3, subparagraph 6.1 (c) states:

> aircraft carrying more than two hundred and sixteen (216) passengers shall carry the number of cabin attendants as prescribed by CASA which shall not be less than one (1) cabin attendant for each floor level exit in any cabin with two (2) aisles.

Efficiency benefits must not compromise safety benefits and if an operator wants to change the operation it will be necessary to demonstrate that there is no significant difference between the current operation and the one proposed. The outcomes of a change must involve a demonstrated equivalent level of safety or better. The United States FAA and the European JAA/EASA provide comprehensive operational standards and oversight resources to support their certification and operating standards.

Where an applicant considers that their operations system exceeds the current requirements, there may be justification for an application to CASA for a direction under regulation 208 of CAR for the carriage of cabin attendants.

The certification basis of an aircraft relates to the design of the floor plan and seating configuration in relation to the location of exits.

It is important that an adequate safety-case is provided to support the application. It is recommended the safety-case includes the following:

- details about the operator's system
- supporting evidence
- a set of safety arguments that links the claims to an appropriate oversight process
- the assumptions and judgements underlying the arguments.

The process of assessing applications to vary the cabin attendant to passenger ratio from that specified within CAO 20.16.3 to some other formula will require a wider scale entry control process described below compared to that which applies to simpler types of approval.

To assist CASA in the assessment of the application, the application process will consist of five phases:

1. *The Applicant Enquiry*
2. *The Formal Submission*
3. *The Proposal Assessment*
4. *The Practical Assessment*
5. *Implementation and Acceptance*

The Applicant Enquiry (Phase One)

Phase one begins when an applicant makes an enquiry about a variation to its requirement in operating under certain provisions of CAO 20.16.3.

Initial enquiries may proceed to a pre-application meeting where the CASA Inspectorate and the applicant reach an agreement on the process and advantages of providing a viable safety outcome-based proposal. It is essential for the operator to have a clear understanding that

although CASA may provide advice and guidance to an applicant, the development of the final product submitted to CASA is solely the responsibility of the applicant.

The Formal Submission (Phase Two)

Phase two begins when the applicant formally submits a proposal for CASA to evaluate. The safety-case and supporting information must be complete and detailed enough to permit a thorough evaluation of the operator's capability and competence to fully demonstrate a minimum of equivalent safe operating practices.

The submission will be examined in sufficient detail to assess the completeness of the required information. If the Applicant's submission is not complete or the quality is unacceptable, the proposal will be returned for additional work.

The Proposal Assessment (Phase Three)

The next phase is CASA's detailed analysis, review, and evaluation of the operator's proposal. This analysis may take place entirely within a regional office, or at the operator's office.

Evaluation examines the form, content, and technical quality of the submitted proposal to determine that the information meets the following criteria:

- the content is not contrary to any applicable provision of the Civil Aviation Act, Regulations, Orders, airworthiness or operational requirements
- the content is not contrary to the direction provided in other CASA policy documents including Acceptable Means of Compliance, Manual of Standards and others.

The CASA Inspector will ensure that supporting documents adequately establish the Applicant's capability and competence to safely conduct operations in accordance with the submitted proposal. Discussion with the operator may be sufficient to resolve certain discrepancies or questions, or to resolve by obtaining additional information. It may be necessary to return certain sections of the submission to the operator

If the CASA Inspector determines that, for specific reasons, the material is grossly deficient or unacceptable, the entire submission will be returned to the operator with an appropriate explanation and the project will be terminated.

If the results of the evaluation are acceptable and a demonstration is required, the CASA Inspector may grant a form of conditional or provisional approval to the proposal before continuing with the process.

The Practical Assessment (Phase Four)

In phase four the CASA Inspector finalises the practical assessment requirements in readiness for the operator's demonstration of the procedures, guidelines, and parameters described in the formal proposal. This practical assessment is an operational evaluation of the Applicants's ability to function in accordance with the proposal finalised in phase three.

Certain demonstrations will be required, examples may include the following:

1. Training program observations.
2. Proving tests.

3. A partial emergency evacuation demonstration.

The CASA Inspector will be involved in the assessment of demonstrations which will include such factors as participant criteria, evaluation criteria, and sequence of events.

Where minor discrepancies are identified, the CASA Inspector will evaluate each discrepancy in terms of its overall impact on the operator's ability and competence to conduct the proposed operation under such conditions.

These discrepancies can often be resolved during the demonstration by obtaining commitments from the Applicant. If the demonstration is not acceptable, the applicant will be notified. The reason for the failure will be discussed with the Applicant, procedures will be evaluated and the details for another demonstration determined.

The process will continue if the conduct of the operator's demonstration is acceptable.

Implementation and Acceptance (Phase Five)

Prior to implementation, the operator will submit to CASA a transition plan emphasising the risk mitigation measures to be undertaken prior to and during the implementation phase.

Approval of the proposal will be notified in writing, and then by a relevant legislative instrument of approval in accordance with regulation 11.160 of CASR, that exempts the operator from current legislative requirements.

Note: Under subparagraph 6 (d)(i) of the Legislation Act 2003 (the LA), an instrument is a legislative instrument for section 5 of the LA if it is declared to be a disallowable instrument under legislation in force before the commencement of the LA. As a legislative instrument, it is subject to tabling and disallowances in the Parliament under sections 38 and 42 of the LI.

Controls

It is the CASA inspector's responsibility to observe the performance of all participants and evaluate the overall conduct of any proving exercises. During a proving exercise the CASA Inspector will assume a passive role of observer and under no circumstances will they operate a system or any equipment, or request any crew member to do so in such a manner that it is not in accordance with normal operating procedures.

When checking compliance with cabin and flight deck safety equipment, it is acceptable for the CASA Inspector to access storage areas (including overhead bins and storage cabinets).

Personal Safety

During the conduct of the practical assessments the CASA Inspector will establish if any company or airport specific workplace safety briefing or training is required before entering a specific area.

While on the ramp or airside CASA Inspectors should use appropriate safety equipment and personal protection equipment suited to the environment. At a minimum, CASA Inspectors should wear a high visibility jacket and hearing protection. Certain operators and aerodromes may specify additional equipment which should be covered in the workplace safety briefing.

Assessment Criteria

When an item meets the specified requirements or criteria, checklist items should be marked as “S” (Satisfactory) or alternatively “U” (Unsatisfactory) to record if the requirements or criteria are met. If the checklist item is not applicable, mark the item as “NA” (Not Applicable).

Provision is made on the assessment checklist to record an initial and subsequent assessment of each item, if required.

If an assessment of unsatisfactory is made against any checklist item, the inspector should provide a comment detailing the reason for the assessment and obtain sufficient and appropriate evidence to support the assessment.

Records

When conducting this procedure CASA Form 1428 should be completed by the assessing CASA Inspector and a record kept on the applicants file.

CASA Form 1428 - Number of Operating Crew (CAR 208 Direction)

4.2.5 Proving Flight

Section 27AD of the Act allows CASA to require an Applicant to conduct proving flights or carry out other aircraft tests or demonstrations of procedures to assess whether the applicant can safely conduct the operations covered by the AOC.

The general requirements for proving flights are detailed in the AOC Handbook Vol 2.

A CASA Inspector will prepare scenarios for the proving flight based on the assessment checklist items relating to passenger and cabin safety processes and procedures.

Form 1440 should be completed by the assessing CASA Inspector to record details of the proving flight.

CASA Form 1440 – Cabin Safety Proving Flight Checklist

4.3 Cabin Safety Information

This section provides guidance for the development of cabin safety information, as well as what items CASA will assess as part of the AOC application process.

Cabin safety items a CASA Inspector will review includes:

- Cabin Crew Operations Manual
- Emergency Procedures Manual
- Training and Checking Manual
- Passenger Briefings
- Minimum Equipment List (MEL).

4.3.1 Crew Operations Manual

Section 28BH of the Act, regulation 215 of CAR and CAO 82 detail the requirements in relation to the provision of Company Operations Manuals. The Cabin Crew Operations Manual

and Emergency Procedures Manual may be separate documents or contained in the same document.

The applicant must provide a copy of their Cabin Crew Operations Manual (however called) with their AOC application. CASA does not formally approve the contents of the manual; however, an acceptance program will determine it as being sufficient for the Applicant's organisation and its intended operations.

The CASA Inspector will review the manuals for accuracy and content. The inspector will verify that the operations manual supports the safe conduct of the flight operations. This means all matters required are addressed and have been included. In addition, the Applicant is to ensure that the procedures and practices described in the manual comply with the various legislative requirements and that proposed procedures are compatible with material in the Operations Manual Suite.

A Cabin Crew Operations Manual must be appropriate to the scale and scope of the operation. The structure below shows one possible arrangement for a Cabin Crew Operations Manual. This standard structure has advantages including ease of compilation, speed of CASA assessment, efficiency of use by staff and ease of amending the documentation.

Operations Manual standard structure:

1. General
2. Standard Operating Procedures
3. Safety and Emergency Equipment
4. Abnormal and Emergency Procedures
5. Aircraft Type Specific - Systems and Equipment
6. First Aid.

General

Table 6

Operations Manual	amendment and revision procedures operator procedures re: accessibility manuals to be carried
Regulatory Authority	role of CASA role and functions of inspectors inspector identification operators procedures re: carriage of inspectors
Organisation Structure	interrelationships between different parts of the organisation lines of reporting within the organisation structure
Operator and Cabin Crew Responsibilities	compliance with regulations and procedures cabin crew operating restrictions crew member remains medically fit to fly

Crew Consumption of Alcohol/Medication/Drugs	Operator policy
Cabin Crew Competence	competency requirements for assignment to operational duties
Cabin Crew Duties and Responsibilities	for each aircraft type
Cabin Crew Number and Composition	minimum and normal cabin crew numbers and composition for each aircraft type
Operation on more than one type or Variant	operators requirements for crew operating on more than one type
Flight Crew Authority and Chain of Command	authority of pilot in command chain of command of the operational crew complement
Cabin Crew Requirements	minimum age and medical requirements
Senior Cabin Crew Requirements	experience and qualifications duties and responsibilities
Fatigue Management Process	flight and duty time limitations rest requirements
Crew Health Precautions	procedures, regulations and guidance
Ramp Safety	procedures, regulations and guidance
Safety Management System	overview and procedures relevant to cabin crew operations
Reporting Systems	cabin defects hazards occurrence incident accident
Common Language	importance and understanding of the use of common language by all crew members when communicating
Terminology and Definitions	aviation terminology theory of flight passenger distribution meteorology areas of operation definitions of terms
Physiological Effects of Flying	hypoxia time of useful consciousness depressurisation time zone changes alertness management

Standard Operating Procedures

Table 7

Crew Communication and Co- ordination	Effective communication and co-ordination between all crew members Crew pre-flight briefings and the provision of necessary safety information with regard to their specific duties
MEL Items	Instruction on how MEL items requiring a change to procedures will be managed
Pre-departure Checks	Safety and emergency equipment Security
Cabin Crew Seats/Stations	Persons authorised to occupy Pre-flight serviceability checks
Carriage of Special Categories of Passengers	Children and infants Sick passengers Persons with reduced mobility (PRMs) Persons with assistance animals Passengers on stretchers Unaccompanied minors Prisoners in custody Deportees Other special categories
Passenger seat allocation/restrictions	Procedures for correct seating Exit row restrictions
Passenger embarkation and distribution	Cabin preparation for flight Passenger requirements Preparation for landing Passenger embarkation and disembarkation Fuelling with passengers on board, embarking or disembarking Seat allocation with reference to aircraft weight and balance Seating of passengers with disability Seating able-bodied passengers adjacent to unsupervised exits Ensuring that passengers are seated where, in the event of an emergency
Unauthorised carriage	Ensuring that no passenger or cargo is secreted on board the aircraft Refusal to carry inadmissible passengers including those under the influence
Passenger and Crew Restraint	Passenger seats and restraints Definition of infants Infant restraint devices Infant/child Extension seat belts Cabin crew safety harness Flight crew safety harness including observer's seat

Cabin Baggage	Weight and size of permitted hand baggage, stowage compartments and weight limit restrictions The management of non-conforming passenger items The process prior to boarding and ground staff procedures
Securing of passenger cabin and galley(s)	Passenger Restraints - correct use Position of Tray tables, Seatbacks, Armrests, Foot-rests, In-flight Entertainment Equipment - all items of equipment and loose items are correctly stowed and secured for take-off and landing Overhead stowage - not overloaded and secured for taxi, take-off and landing Cabin baggage - correctly stowed in an approved stowage location Exits and Escape Paths – exits, aisles and cross-aisles are unobstructed during taxi, take-off and landing Galleys and Galley Equipment – secured using the correct operation of restraint systems for specific items Catering Supplies - correct stowage of all catering items and supplies Electronic Equipment - correct stowage of all electronic equipment, and specification that such appliances should be switched off or to Flight Mode before being stowed Toilets - checks to ensure that toilets are unoccupied and appropriately secured for take-off and landing Cabin Secure Check – definition and timing for the completion of the cabin secure check and procedures for the check to passed on to the flight crew
Assisting Means for Emergency Evacuation (Exit Arming/Disarming)	Procedures to ready doors for movement on the surface and ensure the exit assist means, where applicable, is engage at appropriate times
Passenger briefings and announcements	Air operator language procedures When briefings are to be made Embarkation Pre-take-off Post-take-off Turbulence Pre-landing Post-landing Refuelling and de-fuelling Transit Cabin demonstration positions Content and methodology of demonstration Cabin crew duties during pre-recorded

	announcements and demonstrations
Passenger Safety Briefing Cards	Must correspond with aircraft type and configuration
Cabin Lighting	Cabin lights and the procedures for the dimming of cabin lights
Cabin crew at stations	Cabin crew to be at their crew stations at specified phases of flight Crew members to use their seat harness during specific phases of flight
Taxi, take-off, post-take-off, pre-landing, landing, and post- landing	Procedures regarding cabin crew safety related duties during each of these phases of flight Pre-departure, passenger boarding and taxi procedures should indicate that cabin crew are required to be readily able to reach their emergency station in order to carry out their individual duties and in particular the need for evacuation. Instructions for cabin crew, while at their crew stations, to be particularly alert to potentially hazardous conditions, inside or outside the aircraft, during taxi, take-off and landing. Guidance of crew for action to be taken in the event of abnormal conditions
Silent Review	Description Phases of flight when required Content
Admittance to the Flight Deck	Pilot in command's authority for admittance to the flight deck Policies and procedures regarding admittance to the flight deck and occupancy of flight deck seats
Flight Deck Services	Safety Guidelines Procedures re: crew meals
Cabin Crew Surveillance	Toilets Cabin and galley Flight deck and area outside flight deck door Cargo areas where applicable
Smoking	Smoking on board the aircraft is not permitted What to do in the event of non-compliance of non-smoking law
Fire Prevention	Aircraft electrical equipment (such as ovens and circuit breakers) are used for their intended purposes Fire detection systems (such as toilet smoke detectors) have not been disabled or tampered with Non-smoking policies are adhered to by passengers and crew Monitoring of passengers for compliance with any restrictions and instructions

Turbulence	Description of different types of turbulence Flight crew notification to cabin crew Communication actions to be taken by cabin crew in regard to crew and passenger safety and continuation of cabin service activities Procedures to be followed in the event of turbulence
Dangerous Goods	Procedures for the carriage of dangerous goods
Carriage of Weapons	Procedures regarding the restrictions for the carriage of weapons and ammunition on board
Injury or Death on Board	Procedures to be followed in the event of injury or death
Influence of Alcohol and Drugs	Responsible service of alcohol by cabin crew Procedures for passengers who become inebriated or abusive in flight
Endangering Safety	Procedures to manage passengers who act in ways that potentially endanger an aircraft, its crew or its occupants.
Animals in the Cabin	Procedures for the carriage of live animals in the cabin
Portable Electronic Devices	Passengers must receive instructions on conditional use of electronic equipment, as related to the different phases of flight
Refuelling With Passengers on Board	Procedures for refuelling with passengers embarking, disembarking and on board the aircraft
Passenger Transit	Procedures for the monitoring and control of passengers including instructions to passengers regarding any restrictions
Passenger disembarkation	Procedures for crew during disembarkation including control of passenger movement on the apron, delivery of Instructions to passengers on any restrictions and monitoring of passengers for compliance with any restrictions and instructions

Safety and emergency equipment

Table 8

Minimum Equipment List	General function Who uses it How is it applied
Specific Equipment	For each piece of safety and emergency equipment carried, identify the following: Correct name/terminology

	Location Pre-flight serviceability checks Components Operation procedures including the removal from stowage Limitations Operational precautions Procedures after use
Safety and Emergency Equipment may include	Fire extinguishers Fire axe and crowbars Protective Breathing Equipment (PBE) Smoke goggles Fire gloves Torches Oxygen (fixed and portable) First aid kits Survival equipment including survival beacons Signalling equipment Flotation equipment (infant and adult lifejackets and life rafts) Megaphones Non-mandatory or special equipment

Abnormal and Emergency Procedures

This part of the Operations Manual will contain procedures for air crew in the management of passengers during an abnormal or emergency situation either during flight or on the ground. If procedures for flight and cabin crew are not documented in the same manual, they should be cross referenced to ensure identical information is used throughout.

Table 9

Definitions	Definitions and descriptions of specific types of abnormal and emergency procedures
Crew Coordination	Procedures for effective communication and coordination of all crew members in any type of abnormal or emergency situation, including notification of all crew members that an abnormal or emergency situation exists
Sterile Flight Deck	Definition Phases of flight Emergency communication during these periods
Depressurisation	Description and definition of rapid and slow depressurisation Causes First indications of rapid and slow depressurisation Immediate actions of crew

	Procedures during and following depressurisation Communication with crew and passengers Monitoring of passengers
Dangerous Goods	Procedures pertinent to cabin crew
Procedures in the event of smoke or fumes in the aircraft	Description and procedures Protection of crew and passengers Smoke removal Installation of smoke barrier or use of any other special equipment
Fire Prevention	Enforcement of no-smoking policies Monitoring of lavatory and cabin at specific intervals during flight Responding to smoke detector activation Investigation of unusual smoke/fumes/odours in the cabin
Fire	The basic theory of fire Principles of combustion Classification of types of fire and smoke Locating and identifying the source of any aircraft fire Possible fire sources and high fire risk areas The necessity to immediately locate and identify the fire source Primary and Back-up responsibilities Safe practices in fighting fires Crew communication and co- ordination Management and protection of passengers Post fire procedures
Management of specific types of fires:	Fire on a person Oven and galley Hidden and inaccessible fires for example underfloor Toilet Waste containers Overhead bins Baggage Seat Electrical Flight deck Engine Cargo compartment Lift In-flight entertainment systems Closet Catering equipment/supplies Lithium Batteries
Details of the extinguishing agents used on board the aircraft:	Description of the design of extinguishers for immediate identification purposes The characteristics of the agent

	The limitations and restrictions The methods of application Suitable alternative agents and procedures
Missed Approach	Description Crew procedures
Rejected (Aborted) Take-off	Description Crew procedures
Notification of an Emergency	Flight Deck-to-Cabin, Cabin-to-Flight Deck, Cabin Crew-to-Cabin Crew, notification to passengers Communication Procedures Critical phases of flight
Prepared Emergency Landing/Ditching	Procedures developed in a format that is easily used by crew in preparing for an emergency landing/ditching Format should include responsibilities of each crew member for the purpose of cabin, passenger, galley and self-preparation All passenger briefings should be included
Exit Priorities	Land/Ditching for each aircraft type
Brace Signals and Commands	Descriptions Primary signal Alternate signal Cabin Crew responsibilities at the brace signal
Brace Positions for Impact	Crew and passengers Forward facing Aft facing Side facing Passengers with infants Pregnant passengers
Evacuations vs. Precautionary Disembarkation	Descriptions Conditions under which evacuation/precautionary disembarkation would be necessary Recognition and response to ‘alert phase’
Evacuations	General likelihood and recognition of unprepared emergencies need to be alert Take-off and Landing Possible evacuation scenarios land - at airport, away from airport water - at airport, away from airport ditching Initiation Flight Deck Crew Cabin Crew

	When and How evacuation is initiated Crew Responsibilities for each aircraft type equipment, stations, exits (Primary and Secondary)
Evacuation Signals	Descriptions Primary signal and variations Alternate signal and variations Crew member responsibilities at the evacuation signal
Emergency Evacuation Commands and Applications	Land and ditching Purpose Technique Correct use Pacing Blocked or jammed exit commands
Assistance of Able-Bodied Persons (ABPs)	Criteria for the selection of ABPs Content and method of briefing Specific instructions for re-seating Any special instructions to ensure maximum effectiveness of ABPs including confirmation of responsibilities
Unusable exits	Definition and whether that exit is unserviceable or unsuitable in the circumstances Procedures
Passenger Control	Control of passengers during and after evacuation. Evacuation of passengers with a disability
Incapacitated Crew	Procedures for both flight and cabin crew incapacitation
Post Evacuation	Crew responsibilities
Survival, search and rescue	Search and rescue Basic principles of survival Protection, location, water, and food Water survival Polar survival Desert survival Jungle survival Survival first aid and hygiene
Security **Note:** Operations Manual shall reflect all the security requirements and procedures of the National organisation responsible for Aviation Security. (The Department of Infrastructure and Regional Development)	Security requirements Flight crew compartment security Procedures for managing situations on board Reporting procedures for acts of unlawful interference Aircraft search procedure and check list Hijack procedures

Aircraft Type Specific - Systems and Equipment

The Operations Manual should contain details of the following for each aircraft type, and where differences occur, for each aircraft variant.

Table 10

Aircraft Description	General description of aircraft
Cabin Configuration	full description of the configuration of each variant of cabin safety equipment crew and passenger seats stowage areas toilets galley appliances including ovens, water boilers, control panels water supply systems, sinks, drains, water shut off curtains and partitions lifts rest areas
Cabin Crew Duties	specific areas of responsibility
Equipment Diagram	diagram showing location of all items of safety and emergency equipment, both fixed and portable for each aircraft type and variant
Electrical systems	Location, use and operation of electrical systems including: Normal lighting systems Emergency lighting systems to include floor proximity and external Galley systems power shut-off, appliance overheat and malfunction Circuit breakers Smoke detector systems Evacuation alarm systems Any other alarm systems
Oxygen systems	Location, use and operation of: Cabin system Flight deck system Supplementary oxygen systems
Communication systems	Systems for communication including the location, use and operation of: Interphones Passenger address Crew call systems Passenger information signs Passenger call Audio/video systems - In-Flight Entertainment (IFE).

Exits	Details for each type of exit in the cabin or flight deck including: Full description Location Operation from inside the aircraft Operation from outside the aircraft Operation of arming and disarming systems Use of door straps Use of slides Use of slide rafts Flight/cabin crew rest.
Flotation devices	If the aircraft is equipped with life rafts, slide/raft packs, or slides which may be used as flotation devices, information about this equipment should include: description of the equipment and its contents Inflation and launching Proper method of boarding passengers and crew Detachment from the aircraft Crew assignments during ditching and in the life raft Use of ropes and any other assist devices
Emergency situations/procedures	Procedures specific to aircraft type including: Land evacuation - individual cabin crew duties including procedures for when a cabin crew member is required to manage more than one exit Ditching - individual cabin crew duties including procedures for when a cabin crew member is required to manage more than one exit Depressurisation Smoke and Fumes Fire Crew incapacitation Brace positions applicable to seating configuration

First Aid

It is recommended that the first aid component of the Operations Manual include first aid objectives, specific procedures and information on the following:

- physiology of flight including oxygen requirements and hypoxia
- medical emergencies in aviation including:
  - choking
  - stress and phobia reactions
  - anaphylaxis and allergic reactions
  - hyperventilation
  - gastro-intestinal disturbance
  - air-sickness

  - epilepsy
  - heart attacks
  - stroke
  - shock
  - diabetes
  - emergency childbirth
  - asthma
- Basic first aid and survival including care of:
  - the unconscious
  - burns
  - wounds
  - fractures and soft tissue injuries
- artificial respiration and cardiopulmonary resuscitation
- the use of appropriate aircraft equipment including first aid kits
- first aid oxygen
- other medical emergencies
- first aid treatment that considers the restricted space in aircraft cabins
- additional first aid.

Form 1431 should be completed by the assessing CASA Inspector to record cabin safety related details of the Operations Manual.

CASA Form 1431 – Operations Manual Assessment (Cabin Safety)

4.3.2 Training and Checking Manual

The structure below shows one possible arrangement for a Cabin Crew Training and Checking Manual.

1. Manual
2. Organisation and Duties
3. Training Programs
4. Tests and Checks
5. Facilities
6. Appendices

Manual

Manual Management includes:

- the amendment and revision procedures
- a system for obtaining CASA approval prior to varying the applicable parts of the manual (where applicable).

Availability

- the process to supply copies of documentation to CASA and details the personnel assigned training and/or checking duties.

Organisation and Duties

Organisation includes:

- functions of the regulation 217 of CAR organisation
- the structure of the organisation including line of reporting and accountabilities

Duties and Responsibilities

- the assignment of responsibilities to training and checking personnel
- details of Chief Pilot or Head of Training and Checking
- Manager Cabin Crew Training and Checking
- other training and checking personnel including Manager Cabin Crew Standards, CAO 20.11 Senior Instructors, CAO 20.11 Instructors, Check Cabin Crew, Training Cabin Crew

Experience and Qualifications

- Selection and experience requirements for training and checking personnel
- Training and approval of training and checking personnel
- Process to ensure ongoing proficiency of training and checking personnel in carrying out the functions assigned to them

CASA Form 623 - CAO 20.11 Approved Person to conduct proficiency tests application

CASA Form 1435 - CAO 20.11 Approved Person assessment

CASA Form 625 - CAO 20.11 Senior Instructor Application

CASA Form 1436 - CAO 20.11 Senior Instructor Approval assessment

Cabin Crew Training Programs

Cabin crew are required on board aircraft to ensure passenger safety. The effectiveness of cabin crew in fulfilling their safety-related duties can only be attained through effective training.

Training instils the basic knowledge, skills, attitudes and confidence that will allow cabin crew to handle emergencies. Cabin Crew are an important part of the operational safety system, both in the prevention of accidents and in the assistance they can give to survivors in the event of an accident.

It is recommended that a training system for cabin crew which results in a consistent level of proficiency, allowing cabin crew to undertake their duties. The training system is to be implemented by the Operator, in the most efficient and effective manner.

Initial training

Initial training is required for persons who have not been previously employed by the operator as cabin crew. The training must ensure that each trainee acquires the knowledge necessary to fulfil their responsibilities and duties as assigned to cabin crew in the interest of safety.

This will be primarily accomplished through classroom instruction and also by a series of drills, exercises and hands-on training on safety and emergency procedures designed to provide trainees with the skills necessary to perform their duties.

It is advised that the training be followed by line familiarisation quickly to reinforce the training.

Syllabus

The syllabus must include the following:

- operator familiarisation
- regulatory overview
- aviation terminology
- theory of flight
- physiology of flight
- duties and responsibilities including:
  - operator
  - aircrew.
- standard operating procedures
- safety and emergency procedures including:
  - fire and smoke training
  - water survival training
  - passenger handling
  - communication
  - in flight emergencies
  - evacuation and ditching
  - security.
- emergency equipment
- aircraft specific
- aviation first aid
- non-technical skills
- dangerous goods.

Recurrent training

Recurrent training is designed to:

- ensure the maintenance of knowledge and skills and to familiarise crew members with new procedures and equipment introduced since their last training

- provide an opportunity to practice the skills which have been learned during initial training and are needed in an emergency.

Since high stress levels and panic will degrade previously learned skills, rehearsal and continuing training is essential.

Conversion and differences training

Conversion and differences training includes aircraft type training required in order to qualify and maintain qualification on each type of aircraft to which the crew member will be assigned to duty.

Familiarisation

It is recommended that new entrant cabin crew participate in both an aircraft visit and familiarisation flights.

Cabin crew operating on similar aircraft types should have sufficient exposure to only require a familiarisation flight or aircraft visit.

Refresher training

Refresher training is not be substituted for the requirements of recurrent training. Refresher training is only applicable following an absence from duty ending up to 6 months after the expiry of the previous check.

Senior cabin crew member training

Senior cabin crew training provides additional training for crew in this role.

4.4.2.4 Checking

Checking, also known as 'performance evaluation' or 'assessment' is an integral part of the training process. Assessments are designed to measure crew competence, that the training objective has been achieved.

The training and checking manual should detail:

- the conditions to be present during the test or check
- proficiency requirements
- the standards of accomplishment that have to be met
- the consequences of an inadequate performance
- the procedures for resits.

It is recommended that errors on knowledge exams and practical tests be reviewed to determine areas of remedial training. Crew members must be debriefed following an assessment.

The suggested methods of testing Skills, Knowledge and Attitude (SKA) are:

- **Skills** – are best tested by performance tests (the crew member performs the task described in the objective under real or simulated conditions)

- **Knowledge** – is best tested by oral or written tests
- **Attitudes** – are tested by observations of performance or by means of questionnaires.

Performance tests, in some of the emergency related activities of cabin crew, are time consuming and are sometimes difficult to arrange because of the complexity of simulating emergency situations. However, considering the importance attached to cabin crews responsibility in emergency situations, and the fact that it is only during training that the majority of cabin crew exercise most of their emergency-related activities, individual, as well as collective skill in managing emergency situations must be tested.

If cabin crew encounter the operation of a piece of equipment or safety procedure for the first time outside the training environment then this is considered a training deficiency.

During performance tests, the Instructor will observe each student individually to ensure that every step is properly accomplished. If an instructor was assigned to watch more than one student during a drill, mistakes may be missed by the instructor and therefore left uncorrected.

CAR 217 Proficiency Checks

Proficiency checks must:

- be conducted in each calendar year, but not at intervals of less than four months, for consecutive checks
- be of a nature sufficient to test competency
- have well defined competency requirements
- have clear details of associated processes and documents in accordance with the requirements.

CAO 20.11 Emergency Procedures Proficiency Test

For a crew member to be rostered on a flight as part of the operating crew they must have passed the “crew member emergency procedures proficiency test” within the last year.

The CASA Inspector will ensure an Applicant has processes and procedures in place that:

- provides for an annual proficiency test of crew members
- details the processes and procedures applicable to persons approved to conduct the proficiency test
- defines the proficiency requirements adequately
- details associated processes and documents in accordance with the legislative requirements

20.11 requires the proficiency test to cover all the emergency procedures that a crew member may be called upon to perform (and not just those listed elsewhere in the CAO). It will include at least:

Practical Operation

- **emergency evacuation procedures** – procedures for evacuation and the operation and use of each type of normal and emergency exit, evacuation slide and escape rope

- **fire extinguishing** – method of operation of each type of portable fire extinguisher
- **oxygen** – methods of use of fixed and portable oxygen equipment
- **portable megaphones** – method of operation of each type of portable megaphone
- **ditching procedures** – including where applicable:
  - fitting and inflation of life jackets and location and use of equipment stowed as part of the life jacket
  - for initial qualification, each crew member shall demonstrate competency in the use of the life jacket in the water
  - removal from stowage, launching and inflation of life rafts
  - for initial qualification, each crew member must demonstrate proficiency in their assigned duties
  - all crew members shall be given an annual demonstration of launching and inflation and shall demonstrate competency in life raft boarding procedures and the use of the life raft and its equipment
  - use of signalling equipment
  - use of first aid kits

Theoretical Knowledge

Fire Extinguishing

- knowledge of the location and types of fire extinguishers carried and of the type of fire for which each type of extinguisher should be used
- knowledge of whether the contents of the fire extinguisher and/or the products of fire extinguishing fires are toxic, or likely to adversely affect breathing
- any precautions to be observed in the operation of fire extinguishers

Oxygen

- knowledge applicable to operations on pressurised aircraft and where the provision of oxygen is required
- knowledge of the effects of altitude on:
  - respiration
  - hypoxia
  - duration of consciousness at various altitudes without supplemental oxygen
  - gas expansion
  - gas bubble formation
  - the physical phenomena of decompression
  - precautions in the use of oxygen
  - location of oxygen equipment carried on board.

Survival

- knowledge of the survival methods on land and water, including stowage, location of survival beacons and other survival equipment.

Control of passengers

Control of passengers during emergencies including emergency evacuation:

- methods of control including psychological and physical
- stowage location and correct use of restraint equipment
- handling of disabled passengers
- handling of deranged passengers and others whose conduct might jeopardise the safety of the aircraft
- action to be taken in the event of a hijack or attempted hijack.

Form 1435 can be used to guide the assessment emergency procedures:

CASA Form 1435 - CAO 20.11 checklist

Facilities

Realistic mock-ups of emergency equipment may be used subject to the approval of CASA. Each crew member must satisfy the person certifying the competency, that they have an adequate knowledge of the emergency operation of equipment. If necessary, they should show that they have physically assessed the difficulty involved in operating the equipment.

The operator shall provide information about the training facilities, aids and mock-ups to be used for training and checking including:

- the location
- the process for CASA approval where required
- maintenance
- instructions for use in different programs.

CASA Form 1438 - Cabin Safety Training Facilities and mock-up approval

Appendices

Every training and checking function must be accompanied by the following documentation

- detailed syllabuses, course outlines and lesson plans unless included in main text of manual
- specimen record forms
- checklists.

CASA Form 1434 - Cabin Safety Checklist Training and Checking Manual

4.3.3 Safety Briefings

CAO 20.11.14 requires the operator to ensure that all passengers are adequately briefed on safety information applicable to their operation. Charter or RPT aircraft with a seating capacity

of more than six including the crew oral briefings must be supplemented by printed matter carried in convenient locations for the use of passengers.

Publication 253-2 (0) of CAAP provides guidance that may be used to design, develop and update passenger safety information. It also highlights items that are required to be, or should be covered in safety cards.

CASA Form 1430 – Passenger Briefings (Cabin Safety)

4.3.4 Assistance Animals (CAR 256A Permission)

CAR 256A prohibits animals travelling in the cabin of an aircraft with the exception of a dog accompanying a visually impaired or hearing impaired person as a guide or assistant (subject to conditions set out in the Regulations). Persons with any other form of disability who requires an assistance animal to travel in the aircraft cabin require a permission to do so.

Further information is contained on the CASA website.

Process to apply for an assisting animal to travel in an aircraft

The operator is to make an application for regulation 256 of CAR permission. The application should include details of:

- the animal being trained by an approved organisation
- the animal travelling with its owner or if the animal is being trained as an assistance animal, its trainer
- how the animal meets the operators criteria for travel.

Once the above information is validated, a permission together with completed CASA Form 1429 will be forwarded to the oversighting CASA Inspectorate for issuing.

CASA Form 1429 – Carriage of Animals Checklist (Cabin Safety)

4.3.5 Minimum Equipment List (MEL)

CASA will evaluate the MEL when submitted and where applicable, cabin safety-related items must be reviewed to ensure that operational procedures proposed in the MEL are relevant, practicable and accurately reflected in the Operations Manual. The procedure for the approval of the Operator's Minimum Equipment List (OMEL) is described in the Minimum Equipment List and Permissible Unserviceability Manual.

CASA Form 1442 - Cabin Safety MEL Checklist

4.3.6 Applicable Legislation

The following documents set out the regulatory requirements for Cabin Safety:

- Section 24 of the Civil Aviation Act 1988
- Section 27 of the Civil Aviation Act 1988
- Section 28 of the Civil Aviation Act 1988
- CAR 208 Number of operating crew
- CAR 215 Operations manual
- CAR 217 Training and checking organisation

- CAR 221 Facilities and safety devises for public
- CAR 222 Proving Flight
- CAR 223 Local Laws
- CAR 224 Pilot in Command
- CAR 227 Admission to crew compartment
- CAR 251 Seatbelts
- CAR 253 Emergency and lifesaving equipment
- CAR 254 Exits and passageways not be obstructed
- CAR 255 Smoking in aircraft
- CAR 256 Intoxicated persons
- CAR 256AA Offensive and disorderly behaviour
- CAR 256A Carriage of animals
- CAR 309 Powers of Pilot in Command
- CAO 20.4 Use of Oxygen and Protective Breathing Equipment
- CAO 20.9 Refueling
- CAO 20.11 Emergency and lifesaving equipment and passenger control in emergencies
- CAO 20.16.2 Cargo in the cabin
- CAO 20.16.3 Air service operations – carriage of persons
- CAO 82.1 Conditions on Air Operators Certificates Authorising Charter Operations
- CAO 82.3 Conditions on Air Operators' Certificates Authorising Regular Public Transport Operations in Other Than High Capacity Aircraft
- CAO 82.5 Conditions on Air Operators' Certificates Authorising Regular Public Transport Operations in High Capacity Aircraft.

4.3.7 Applicable Reference Material

- ICAO Annex 6, Part 1 Operation of Aircraft
- ICAO Cabin Crew Safety Training Manual (Doc 10002)
- CAAP 215 – 1(2) The guide to the preparation of Operations Manuals
- CAAP 253-2(0) Passenger Safety Information: Guidelines on content and standard to be provided to passengers by aircraft operators
- CASA Aviation Ruling 4/2004 – Training and Checking: number of checks “each calendar year”
- Federal Aviation Administration’s Flight Standards Information Management System (FSIMS) Order 8900.1 Volume 3, Chapter 30.

5. Safety Management Systems

As specified in CAOs 82.3 and 82.5, a condition placed upon Air Operators' Certificates authorising regular public transport operations in low and high capacity aircraft is the implementation of a safety management system (SMS).

An SMS is a systematic approach to managing safety that must document the organisational structures, accountabilities, policies and procedures necessary to manage safety in a systematic way including:

- a statement of the operator's safety policy and objectives
  - the management commitment to and responsibility for, safety risk management
  - the safety accountabilities of managers
  - the appointment of key safety personnel
  - the SMS implementation plan
  - any relevant 3rd party relationships and interactions
  - an emergency response plan
  - the coordination of the emergency response plan
- a safety risk management plan
  - hazard identification processes
  - risk assessment and mitigation processes
- a safety assurance system
  - safety performance monitoring and measurement
  - management of change
  - continuous improvement of the SMS
- a safety promotion system
  - training and education
  - SMS safety communication
- for an operator who operates an aircraft with a maximum take-off weight exceeding 27,000kg – a flight data analysis program.

A successful SMS is tailored to fit the size, nature and complexity of the organisation to ensure that hazards are identified and the associated risks are assessed and mitigated.

Although the details and level of documentation of an SMS may vary, ensuring the fundamental elements are in place, as well as being suitable, functional and effective, will assist assessors being able to determine the suitability of the organisation's SMS.

The document structure proposed in this section is intended aid the assessor in the conduct of their assessment, and reflects the systematic nature of SMSs. The headings provide assessors with a framework when assessing the SMS aspects of an application – based on their nature of operations, size and complexity.

5.1 Size and Complexity Considerations

Is the SMS appropriate for the size and complexity of the organisation? The SMS needs to be 'tailor-made' so one size does not fit all organisations. However, assessors need to be satisfied that all of the SMS components and elements required for that organisation are dealt with. Assessors should also consider the following:

a. A small organisation may choose not to appoint a dedicated Safety Manager (SM). The Accountable Manager (AM) may instead choose to appoint a responsible manager to the role. The implications of such an appointment should be considered separately.

b. The safety committee structure should reflect the distribution and hierarchical levels within the organisation. A single, simple safety committee may be appropriate for a small organisation having less than 20 staff and at one location. Whereas larger, or more diverse organisations may need several sub-committees focusing on local needs and issues. It may well be fitting for very large organisations to establish a multi-tier safety committee structure with local Safety Action Groups (SAGs) consulting and/or answering to an Executive Safety Review Board (SRB).

c. In smaller organisations, staff will perform multiple functions. The process and management of the SMS will be less formal and simpler. The checklist items within this handbook will provide guidance; however some items will be more applicable than others, depending on the size of the organisation. It is for the organisation to determine the size and complexity of their SMS and what works for them. The assessors should, however, assure themselves that the size and complexity of the SMS is appropriate for the size and complexity of the organisation.

5.2 Integration Considerations

SMS goes beyond a traditional quality management system (QMS) by focusing on the safety of both human and organisational aspects of an organisation. Within an SMS there is a distinct focus on operational safety and the human element in the system. Therefore, the integration of human factors (HF) into the SMS should be a key objective of the organisation's SMS program.

The coordination and integration process may be a challenging task for many organisations, and could impact on the ability to successfully implement an SMS program in the short to medium term. So an alternative would be to plan for integration once the SMS is established within the organisation. This can be accomplished by a phased approach being defined in the organisation's SMS implementation plan.

5.3 Safety Policy and Objectives

In the SMS framework management's commitment to and responsibility for safety is formally expressed in a series of statements expressed in the organisation's safety policy. The safety policy reflects the organisation's philosophy of safety management and becomes the foundation on which the organisation's SMS is built. The safety policy outlines what the organisation will do to achieve the desired safety outcomes.

Safety objectives often accompany the safety policy. They define what the organisation wishes to achieve, and the safety policy declares how the organisation intends to achieve them and their commitment to achieving them. The safety objectives should state an intended safety outcome and may be expressed in terms of short, medium and long term safety objectives. The safety objectives, like the safety policy, should be publicised and widely distributed across the organisation.

5.3.1 Safety Policy

The organisation's safety policy is contained within the SMS manual and should also be distributed around the organisation to highlight management's commitment to safety. It should set a clear, high-level direction for the operator to follow in order to manage safety effectively.

As with the SMS, the safety policy should reflect the chief executive officer's written approach and commitment to safety and should:

- reflect the organisation's commitment regarding safety
- highlight the organisation's structures that are in place to systematically manage safety
- include a clear statement about the provision of the necessary resources for the implementation and maintenance of the organisation's SMS and the safety policy
- include safety reporting procedures
- clearly state which behaviours are unacceptable in relation to the organisation's aviation activities, and include the circumstances under which disciplinary action will and will not apply
- be signed by the chief executive officer of the organisation
- be communicated, with visible endorsement, throughout the organisation
- be periodically reviewed to ensure it remains relevant and appropriate to the organisation and the conduct of the authorised Part 119 air transport operations.

5.3.2 Safety Objectives

Effective safety objectives consist of broad directions that assist to establish safety goals or desired safety targets, and should be in-line with the organisation's safety vision and management's commitment to the systematic management of safety. Safety objectives should state intended safety outcomes. Some examples may be:

- providing feedback to staff on safety reports within 2 weeks
- to highlight if there is an increase in safety reporting by 20% over the next 12 months
- to see a reduction in maintenance-related events by 15% over the next 12 months.

Safety objectives may be expressed in terms of short, medium and long term desired outcomes. Safety objectives should be SMART (Specific, Measurable, Achievable, Realistic and Timely) so that their effectiveness can be measured.

The organisation should have a documented plan of action (for example, implementation plan with a phased approach) to achieve each specified safety objective. For example:

- phase 1 may be objectives to be addressed within 6 months
- phase 2 may be objectives to be addressed within 12 months

- phase 3 may be objectives to be addressed within 24 months.

The organisation should carry out a periodic review of the stated safety objectives to ensure they are still relevant, and that they are providing desired outcomes in line with the organisation's strategic safety goals.

Where the review has identified deficiencies the organisation should initiate a plan to correct them.

5.3.3 Management commitment to, and responsibility for, safety

The assessment should determine whether the organisation can validate a demonstrated commitment to safety, proportionate to the size and complexity of the organisation. Examples of assessment observations might include:

- Of the management team:
  - There is commitment of the organisation's senior management to the development, implementation and ongoing improvement of the organisation's SMS
  - There has been a management team recruited, or in place, appropriate to the size and complexity of the organisation, to support the organisation's SMS
  - Senior management have been involved in the development and dissemination of the organisation's safety policy and safety objectives
  - Senior management have documented defined roles, responsibilities, and accountabilities to support the organisation's SMS.
- Of the organisational structure:
  - Senior management need to have developed an organisational structure that has the responsibility, authority and accountability assigned to it to ensure the SMS will function as planned
  - An organisational chart, which includes the organisational structure to support the SMS, has a clear line of communication represented from the Safety Manager directly to the CEO.

5.3.4 Safety Accountabilities of managers

- The organisation should provide evidence that the chief executive officer, irrespective of other functions, has ultimate responsibility and accountability for the implementation and maintenance of the SMS.
- Lines of safety accountability throughout the organisation should be clearly defined, including direct accountability for safety on the part of senior management.
- The accountabilities of all members of management and employees, irrespective of other functions, with respect to the safety performance of the SMS, should be identified.
- Safety responsibilities, accountabilities and authorities should be documented, normally within the SMS manual, and communicated throughout the organisation so that everyone is aware of their respective roles and responsibilities.

Management positions should have authority to make decisions regarding the organisation's safety risk tolerance.

5.3.5 Appointment of key safety personnel

Depending on the size and complexity of the organisation the safety manager should have operational aviation management experience, an adequate technical background to understand the systems supporting the activities and a sound understanding of safety management principles.

An operator of a larger organisation may have other safety management personnel, in addition to a safety manager, to provide guidance and direction on the SMS. These organisations may need safety committees to oversight various departments within the organisation. Examples of these safety committees may include:

- a Safety Review Board (SRB) or Safety Committee
- a Safety Action Group (SAG).

5.3.6 Safety Manager

The appointment of an appropriate safety manager is critical to the success of the organisation's SMS. Depending on the size and complexity of the organisation, the safety manager should have an adequate technical background to understand the systems supporting the conduct of air transport operations, a sound understanding of safety management principles and must have sufficient relevant safety management experience.

Roles and Duties

The organisation may appoint a safety manager responsible for the management of the organisation's SMS. The safety manager:

- must have independence from the operational areas, so as not to be subject to undue influence, and should have authority to look across all facets of the operation from a safety perspective
- should report directly to senior management and have a formal direct line of communication with the chief executive officer
- should regularly report to the chief executive officer on the performance of the SMS and be able to suggest improvements where required.

The safety manager's role, responsibilities and duties should be clearly documented, specified and defined in the operator's SMS manual.

Safety Management Experience

Depending on the size and complexity of the organisation, the safety manager should have:

- relevant operational knowledge and safety management experience in the functions of an aviation organisation
- an adequate technical background to understand the systems supporting the activities
- a sound understanding of safety management principles, including the ability to:
  - lead, manage and set standards with regard to the SMS
  - implement the SMS in accordance with the organisation's exposition.

- a sound knowledge and understanding of human factors and non-technical skills (HF&NTS) and, if required, FDAP and/or FRMS
- the ability to relate to personnel at all levels, both inside and out of the organisation.

Without limiting the considerations involved in the determination of what is considered to be 'sufficient' and 'relevant' safety management experience for a safety manager nominee, the following considerations apply:

- the nature and complexity of the proposed activities, and whether the nominee has safety management experience from within a similar size of operation
- the need to ensure the safe conduct of the activities in accordance with the organisation's exposition and civil aviation legislation requirements
- the leadership, management and standard-setting skills required by the nominee for the proposed activities, and whether the nominee's previous experience would have enabled them to acquire these skills and carry out the responsibilities of the position
- the need to take all reasonable steps to ensure each proposed activity, and everything done in connection with each activity, is carried out with a reasonable degree of care and diligence.

Responsibilities

The safety manager may delegate duties to other personnel (for example to a safety officer or safety representative) however, the safety manager retains responsibility and accountability for the SMS, and any additional responsibilities required by the organisation.

The organisation must provide a means for the safety manager to carry out each of the responsibilities of the position. This may be done by way of written processes and procedures, supporting documentation, making available finance and resources, or via support to the safety manager in carrying out each responsibility.

The organisation's processes and procedures should be documented to ensure clarity, repeatability and traceability, and enable the person appointed as the safety manager (either permanently or temporarily) to effectively manage the responsibilities for which the position is accountable.

Each of the organisation's processes, relevant to the safety manager's responsibilities, should consist of a series of procedures or actions that contribute to the desired outcome. Each documented procedure, which may be included in the organisation's exposition or safety management system manual, should address:

- what must be done
- who should do it
- when it must be done
- where it must be done
- how it must be done
- other documentation must be used (for example manuals, instructions, forms etc)
- how the procedure is to be monitored and, if required, improved.

Manage the Safety Management System

The means must be provided for the safety manager to manage the safety management system. These may include, but are not limited to:

- implementing, maintaining (including day-to-day operation), reviewing and revising the SMS and, if required, the FDAP or FRMS
- drafting the SMS manual
- managing the SMS including the management of corrective, remedial and corrective action in relation to the system
- providing safety advice to management and staff
- promoting safety awareness and a positive safety culture throughout the organisation
- participation in the organisation's periodic safety meetings and committees
- investigating accidents and incidents
- maintaining an appropriate reporting system to identify and manage hazards
- identifying ongoing safety training requirements to support the SMS safety objectives
- providing HF&NTS training or arranging a third party to provide the training for the operator's personnel
- overseeing internal and external SMS audit programs
- maintaining the Emergency Response Plan (ERP).

Reporting on effectiveness of the SMS

A means must be provided for the safety manager to report to the chief executive officer on the effectiveness of the SMS. These may include, but are not limited to:

- receiving information and data from the safety management system (including incident reporting and accident data and trending information)
- collecting and reviewing information obtained during internal audits and surveys
- receiving regular feedback and reports in relation to safety objectives and safety performance indicators.

Maintenance of the SMS

A means must be provided for the safety manager to manage the maintenance and continuous improvement of the SMS and FRMS (if any). These may include, but are not limited to:

- implementing, maintaining (including day-to-day operation), reviewing and revising the SMS and, if required, the FDAP or FRMS
- amending and reviewing the SMS manual
- maintaining an appropriate reporting system to identify and manage hazards management of the risk management plan.

5.3.7 Safety Review Board or Safety Committee

The size and complexity of the organisation will determine whether the organisation has a Safety Review Board (SRB), as the highest-level internal safety-related meeting. For smaller operators, a safety committee may provide the guidance required for the operator's SMS. Normally an SRB would provide direction to the organisation's various Safety Action Groups (SAGs), whereas a safety committee may address all of the operator's SMS issues.

If the operator has an SRB, then it should be chaired by the CEO or a non-executive director with the CEO in attendance, and include the Safety Manager. A safety committee would typically consist of the CEO, the Safety Manager and other members of the senior management team.

In determining whether the organisation has provided sufficient evidence to show that the SRB or Safety Committee is appropriate for its size, complexity and scope of work, consideration should be given to:

- **Accountability** – The SRB or Safety Committee should be chaired by the CEO.
- **Membership** – Typically the SRB would comprise the CEO senior managers and the Safety Manager.
- **Terms of Reference** – The terms of reference for the SRB or Safety Committee should be documented within the organisation's SMS manual and may be responsible for:
  - monitoring the effectiveness of the organisation's safety management processes
  - monitoring the effectiveness of the corporate oversight processes which independently validate the organisation's safety performance
  - monitoring and reviewing the organisation's safety/hazard reports and reviewing controls/defences within the organisation's risk management plan
  - ensuring any corrective action is being taken in a timely manner
  - monitoring the organisation's safety performance, including review of safety objectives and performance indicators
  - ensuring appropriate resources are allocated to meet agreed actions which enhance safety performance beyond that required by regulatory compliance
  - monitoring the effectiveness of safety oversight of sub-contracted operations carried out on behalf of the organisation
  - giving strategic direction and guidance to the organisation's Safety Action Groups.
- **Safety Manager Duties** – The Safety Manager is responsible for:
  - acting as Secretary for the SRB
  - taking minutes of the meetings, and documenting and tracking outstanding action items ensuring that any strategic direction for the SAG is documented and recorded and then passed onto the SAG for further action.

5.3.8 Safety Action Group

SAGs are accountable to and take strategic direction and guidance from the SRB. The SAGs comprise a representative section of the line management and supervisory staff of all departments in the organisation (not only operations and maintenance, but also other disciplines such as financial and commercial).

In a large organisation there may be more than one SAG. These groups should meet periodically to support the identification of hazards and the assessment of risks faced by the organisation, and to suggest methods of mitigation. They should also support the systematic review of safety-related standards and procedures, as well as providing experienced advice on major aviation safety issues.

In determining whether the organisation has provided sufficient evidence to show that the SAG is appropriate for its size, complexity and scope of work, consideration should be given to:

- **Accountability –** SAGs are responsible and accountable to the corporate SRB. Each SAG is chaired by the appropriate functional director and is responsible for that function's contribution, development and improvement of the SMS.
- **Membership –** SAG membership will normally be drawn from managers, supervisors and staff from within the appropriate functional area. The safety manager would normally attend each SAG primarily as an independent facilitator/observer
- **Terms of Reference –** The terms of reference for the SAG should be documented within the organisation's SMS manual

The SAG is responsible for:

- overseeing operational safety within the functional area of responsibility
- ensuring any corrective action is taken in a timely manner
- reporting to, and accepting strategic direction from, the corporate SRB.

The SAG terms of reference may include:

- ensuring that hazard identification and risk assessments are carried out, reviewed and monitored as appropriate, with involvement of staff as necessary to increase safety awareness
- ensuring that satisfactory arrangements (for example hazard reports) exist for safety data capture and actioning of personnel feedback
- ensuring that suitable safety performance indicators are developed and are regularly reviewed for the functional area
- convening of meetings to ensure that effective opportunities are available for all personnel to participate fully in the management of safety
- ensuring that adequate investigation of safety events/issues takes place and that safety reviews are conducted and any actions arising tracked to completion
- ensuring that appropriate safety, emergency and technical training of personnel is carried out to meet or exceed minimum regulatory requirements.

The Safety Manager is responsible for:

- acting as a facilitator or observer for the SAG meetings

- ensuring minutes are taken, documented and tracked for each functional area
- ensuring that relevant outcomes from each SAG are communicated throughout the organisation for all personnel
- ensuring that the SRB are kept informed of SAG meetings and outcomes.

5.3.9 SMS Implementation Plan

The organisation's SMS implementation plan should be a detailed guide which defines the approach to the implementation of the SMS. It should be a realistic plan for implementing an SMS that meets the organisation's safety strategy, safety objectives, safety management activities, resource implications, safety training, safety promotion and timelines.

In determining whether an operator has provided sufficient evidence to show that their SMS implementation plan is appropriate for their organisation, consideration should be given to:

- the gap analysis used to determine the competent and elements of the SMS
- the major elements of an SMS implementation plan
- the operator's approach and methodology in implementing the plan.

Gap Analysis

In implementing an SMS the organisation should undertake a gap analysis to determine which components and elements of an SMS are currently in place, and which components need to be added or modified to meet SMS regulatory requirements.

Missing or deficient items identified in a gap analysis should form the basis of the SMS implementation plan. The organisation should 'tailor' the SMS to:

- the size, complexity, and scope of the organisation and its proposed activities
- the hazards and risks inherent with the proposed activities.

Implementation Plan

The SMS implementation plan must cover all SMS components and elements including the initial gap analysis. It should provide details on the development of processes (for example hazard identification and risk assessment, reporting processes) and how it intends to implement all of the key SMS components and elements.

Phased Approach

Due to the possible deficiencies an organisation faces after the initial gap analysis, it would be unrealistic to impose tight timeframes for SMS implementation. Typically, depending on the size and complexity of the organisation, 12 to 18 months and up to 24 months is normally sufficient time to implement an SMS. Timelines can be discussed further with the CASA inspectorate if required.

It is recommended that organisations undertake a phased approach to SMS implementation. If a phased approach is undertaken it should include realistic timelines for starting and completing each of the major SMS elements. Examples of timelines and phased implementation can be found in CAAP SMS-1(0).

5.3.10 Relevant Third Party Relationships and Interactions

The organisation's SMS should ensure that the level of safety of an organisation is not eroded or compromised by the inputs, services and supplies provided by external (third party) organisations.

Third party interfaces may include:

- the lease and cross-hire of aircraft
- aircraft and simulator maintenance providers
- instructors and examiners engaged on a contract basis
- fuel supply arrangements.

The organisation holds the overall responsibility for the safety of services provided by a contractor. Therefore, the contract between the organisation and the third party must specify the expected safety standards that the organisation will ensure the contractor complies with.

An operator should ensure the following minimum standards apply when engaging third party contractors:

- Service Level Agreements (SLAs)
- evidence of a contractor's safety performance
- evidence of contractor experience and qualifications

Service Level Agreements (SLAs)

There should be a written contract, known as a Service Level Agreement (SLA), in place between the organisation and the contractor prior to services being provided. All SLAs should contain a schedule of oversight to monitor the third party's performance on a regular basis.

All agreements should detail how any noted safety hazards and deficiencies will be addressed, and the timeframe in which to accomplish this.

Where a service being provided is CASA-licensed or certified, the written agreement should require the third party to advise the organisation of any CASA regulatory action that may affect their ability to provide the required services.

Contractor Performance and Qualifications

All third party providers should hold the appropriate qualifications and credentials or approvals for the work being carried out.

All third party organisations should be able to demonstrate that they are providing trained and competent staff.

All third parties should understand the organisation's SMS, and their responsibilities within it. This should be accomplished by third party SMS induction training delivered by the organisation.

There should be a mechanism in place where the organisation can assess the third party's previous safety record, prior to the contracted services commencing.

5.3.11 Coordination of an Emergency Response Plan

An emergency response plan (ERP) is an integral part of the organisation's SMS and should be established to facilitate management of a hazardous event or accident and mitigate the impact on normal operations. All of the organisation's operational locations should develop ERPs (where applicable) and maintain a robust means of coordinating these with the main accident coordination procedures.

The organisation's ERP should:

- assign responsibilities to specific individuals
- provide emergency procedures
- control notification to outside agencies (for example, fire or police)
- nominate channels and centres of communication
- provide for 'in-house' emergency response
- provide effective liaison with accident investigators and outside emergency services
- provide methods for communicating with the public in the event of a major incident.

The organisation should ensure that their ERP is properly coordinated with the ERPs of those organisations with which it must interface during the conduct of the proposed activities.

An ERP may be a stand-alone document, or it may form a part of the organisation's SMS manual, or may be a combination of both. For example, the ERP policies, roles and responsibilities may be contained within the SMS manual, and immediate response information may be contained in easily accessible booklets or pamphlets.

As a minimum, the organisation's ERP should include the following elements:

- the purpose of the ERP
- when to activate the ERP
- external agency interface
- crew and passenger welfare
- casualty and next-of-kin coordination
- accident investigation
- coordination of the ERP at the accident site
- preservation of evidence
- media relations
- claims and insurance procedures
- aircraft wreckage and removal
- emergency response planning.

The organisation should provide a means for ensuring that personnel are adequately trained and familiar with the procedures that will be employed in the event of an accident or serious incident. This should include rehearsing plans regularly and providing training, including:

- actual scenario-based training on-site
- desktop exercises
- safety stand-down day review.

The organisation should ensure that personnel are aware of the location of the ERP instructions to enable efficient access in case of an emergency. This may be achieved by the organisation ensuring the emergency response posters, instructions and information pamphlets etc. are accessible in all relevant workplaces.

Following an ERP training exercise or any feedback relating to the operator's ERP which will provide improvements, the organisation should have a mechanism in place to incorporate lessons learned into the SMS and ERP amendment process.

The organisation's mechanism should ensure that feedback and improvements are seen throughout the organisation, to ensure personnel are aware of the lessons learned. Methods the organisation can employ to achieve this may be via:

- company intranet
- safety newsletters
- safety stand-down days.

5.3.12 SMS Documentation

An organisation's SMS should be supported by robust, current and controlled documentation.

An organisation's SMS documentation must consist of:

- the SMS Implementation plan
- the SMS Manual, describing the operator's SMS.

The organisation should ensure the requirements for personnel to support the SMS, at all levels, are documented and the relevant documents are freely available.

The organisation's safety documentation should demonstrate to all personnel and third parties that business is conducted based on safety management principles.

If the organisation's procedures are bound in separate manuals, the organisation should clearly publicise this so that all personnel have simple and effective access to detailed information about the SMS procedures and processes.The most effective method for an operator to document all SMS procedures, policies and practices is to consolidate all of the information into a single SMS Manual.

The organisation's SMS manual should:

- contain all of the policies, procedures and instructions covering the organisation's SMS standards and SMS requirements
- be concise and clearly written to facilitate easy comprehension and application.

Any information that may change regularly in the SMS manual (for example the personnel who are assigned to specific safety roles and responsibilities) may be put into appendices or annexes to the SMS manual to enable this information to be easily updated and maintained.

All of the applicable SMS components and elements should be documented within the SMS manual.

5.4 Safety Risk Management

5.4.1 Introduction

Safety risk management is identification of hazards and the analysis of associated risks then mitigating these risks to an acceptable level, normally as low as reasonably practicable (ALARP), or where possible eliminating them. The systematic identification and treating of hazards and risks in an organisation, together with the continual monitoring and communication of the risk management processes, are vital to the sustainability and effectiveness of the SMS.

5.4.2 Hazard Identification

The organisation should develop and maintain a process that ensures hazards associated with its aviation operations are identified.

The organisation's hazard identification process should be based on a combination of reactive, proactive and predictive methods of safety data collection.

The starting point for any safety risk management process needs to be the establishment of the context of hazard identification. The organisation must have a systematic and comprehensive hazard identification process because hazards not identified at this stage may be excluded from further risk analysis and mitigation.

5.4.3 Internal Safety Investigation

The scale and scope of any investigation should be suitable to determine and validate the underlying hazards. A systems approach is useful to provide a broad appreciation of the context around any safety occurrence. Effort expended should be proportional to the perceived benefit to the organisation in terms of identifying hazards and risks.

The organisation's internal safety investigation system should include:

- a reporting system
- an investigation policy
- the investigation methodology
- investigation recommendations and follow-up.

Reporting System

The operator should have certain processes in place for personnel to report hazards and events in the workplace. Processes that enable reporting may include:

- a paper based reporting system (for example via drop boxes)
- a web-based reporting system
- a reporting system on the company's intranet.

The organisation should have a documented procedure to determine what hazards and events need to be investigated. The procedure should be able to demonstrate that the operator has a review, classification and decision process in place to establish which hazards and events are investigated, and how thoroughly.

Investigation Policy

Documentation for internal safety investigations should be clearly documented within the organisation's SMS. Points covered should include:

- the scope of the investigation
- the composition of the investigation team
- how investigation outcomes are recorded for follow-up trend analysis
- the timeframes for completion.

The organisation's investigation policy documented within the SMS should highlight the purpose of the investigation. The policy should clearly state that:

- each investigation will be systemic in nature (focus on 'why' an event happened rather than just 'what' happened)
- the purpose of each investigation will not be to apportion blame to individuals, rather it should confirm that safety culture principles apply in relation to individual or team behaviours (so not focussing solely on the 'who' was involved)
- all contributing factors to the event should be considered, as well as root causes, rather than focusing only on the active failure (that is the event itself).

Investigation Methodology

The extent of each investigation will depend on the actual and potential consequences of the hazard or event. The organisation may determine this through an initial risk assessment. Where resources are limited the organisation needs to determine that the effort expended, in terms of identifying hazards and risks to the organisation, will be proportional to the perceived benefit of the investigation.

The organisation should have a means to ensure personnel conducting internal safety investigations (normally the safety manager or designate) are trained in aviation safety and safety investigations.

The organisation should provide the safety investigator with:

- the authority to interview personnel and managers
- access to the source of any relevant company information.

Investigation Recommendations

The organisation should have a means for:

- using identified safety issues (as a result of an investigation) in re-evaluating existing risk controls or defences
- ensuring that identified safety issues and lessons learned, as well as further controls and defences are incorporated to prevent a recurrence of the hazard or event
- reviewing safety issues by the appropriate safety committee
- ensuring that recommendations are used to improve and/or amend the organisation's SMS.

Identified safety issues, lessons learned, controls and defences implemented to prevent the recurrence of a hazard or event should be spread throughout the organisation. Methods used to publicise safety issues through the organisation include:

- safety stand down days
- company intranet
- safety newsletter
- specific safety posters, prominently displayed within the operator's headquarters and training bases.

Risk Management Process

The specific design and development, integration and implementation of the organisation's safety risk management process will be influenced by the size, complexity and requirements of the operator, its processes, policies, practices and its SMS.

At a minimum, the organisation should employ the following risk management methodology:

- **hazard identification –** identification of hazards that could adversely affect people, equipment, property or the environment
- **assess and rank –** assessment of the risks in regards to likelihood and consequence of the hazards and their rank in order of importance
- **controls –** identification of the current controls and processes in place to manage the hazards
- **evaluate –** evaluation of the effectiveness of each defence and control, to test if the hazard has been reduced towards as low as reasonably practicable
- **further mitigation –** identification of additional defences or controls that could be implemented to mitigate the hazards or risks, to ensure the risk now as low as reasonably practical
- **record, monitor and review –** recording, and continual review and monitoring, of the information in a hazard/risk register, as well as the effectiveness of all steps of the risk management process

Further information on the identification of hazards and the treatment of associated risks can be found in CAAP SMS-1(0).

5.5 Safety Assurance System

5.5.1 Introduction

Safety assurance systems need to include the following internal elements:

- Safety Performance Monitoring and Measurement
  - An operator must be able to process appropriate feedback within their respective SMS, so that the safety management cycle can be completed. The feedback is used to evaluate system performance and to implement changes to the system if required. It also gives stakeholders an indication of the level of safety within the organisation.
- Management of Change

  - An operator should have a formal process for identifying internal and external change that may affect established processes and services, or have an adverse effect on safety.
- Continuous Improvement of the SMS
  - All operators, regardless of their size or complexity, require a means of regular review to ensure the aims and objectives of the SMS are being achieved. Periodic safety reviews validate the SMS and allow for continuous improvement. Regular review and evaluation allows the operator's senior management to pursue continuous improvements in safety management and ensure that the SMS remains effective and relevant to the conduct of the operator's activities.

5.5.2 Safety Performance Monitoring and Measurement

An operator's safety performance monitoring program should be specifically 'tailor-made' to determine the best methods are being employed considering the organisation's size and complexity.

A typical safety performance monitoring program will employ the following:

- safety performance
- safety monitoring
- safety measurement
- safety review.

Safety Performance Program

An effective safety performance program may include:

- an effective hazard reporting system
- safety objectives where 'SMART' targets have been established
- defined and promulgated safety performance indicators
- relevant safety performance indicators that are linked to the organisation's safety objectives
- safety objectives, safety targets and safety performance indicators that are reviewed and updated periodically.

Safety Monitoring

The organisation's periodic monitoring processes may include:

- monitoring and reporting on safety management activities (by the safety committee, SAG and/or SRB)
- measuring and reporting on safety management performance
- monitoring and trend analysis of safety performance indicators.

Safety Measurement

The organisation may accomplish safety measurements through:

- safety surveys/questionnaires
- safety studies
- internal and external safety audits, that include:
  - assessing normal operations
  - ensuring adequate resources are available to carry out the audits
  - ensuring personnel are adequately trained to carry out the audits
  - assessing risk mitigations and controls/defences to ensure they remain relevant
  - tracking audit findings through to completion
  - conducting feedback and trend analyses to identify systemic issues throughout the organisation and appropriate actions to be taken.

Safety Review

Safety review may include:

- systematic capture of daily performance data
- programs such as FDAP and LOSA
- a feedback mechanism within the program to ensure relevant data is collected, analysed and used to assess safety performance
- systematic review and follow-up on all reports of identified safety issues
- communication to all stakeholders of the level of safety within the organisation.

5.5.3 Change Management

The change management process included in the organisation's SMS should be a formal process to be used to allow for external and internal change that may affect established processes and services.

The organisation's change management process should use the organisation's existing risk management processes to ensure that there is no adverse effect on safety.

The organisation's change management process within an SMS should only focus on hazard identification and the controls or defences to be employed to improve the safety of the conduct of the organisation's air transport operations. Other potential risk factors (such as a lack of business growth) may also be considered; while they are additional to the scope of SMS management of change, they may have the potential to affect operational safety.

In determining whether the organisation's change management process is appropriate, consideration should be given to the organisation's processes for:

- identifying the change
- managing the change
- monitoring and review after the change.

Change Identification

Changes that require a formal risk assessment, such as organisational changes, should be clearly identified and documented in the organisation's SMS. Organisational changes that may require a formal risk assessment may include:

- implementation of new design systems
- modifications to procedures or operations
- appointment of new senior managers
- changes to the work environment
- new training programs
- changes in customer expectations or requirements
- relocation or expansion
- reallocation of resources or the responsibilities of key personnel.

Change Management Process

The organisation's change management process should involve the following steps:

- develop the case
- conduct risk assessment and planning
- prepare the plan
- implement the change
- ongoing monitoring and review.

The organisation's change management process should demonstrate that:

- the changes made are implemented in a measured and staggered way in order to minimise potential adverse effects on organisational and operational safety
- the use of resources and the involvement of personnel in the process will not impact operational safety
- previous risk assessments, existing known hazards, and current controls and defences are reviewed to determine possible validity and worth
- communication and consultation takes place with all key stakeholders during the change management process.

Monitoring and Review

To ensure changes incorporated do not alter the operator's priorities, the organisation should have a means to ensure implementation is constantly monitored and reviewed, and where necessary, adjusted.

The organisation should ensure that communication and consultation takes place with all key stakeholders during the ongoing monitoring and review of changes.

5.5.4 Continuous Improvement of the SMS

The organisation should monitor and assess the effectiveness of its SMS processes to enable continuous improvement of the overall performance of the SMS. Methods to achieve this may include:

- a continuous improvement process
- feedback mechanisms
- review and follow-up of feedback mechanisms.

Continuous Improvement Process

The continuous improvement process may be achieved and demonstrated by:

- formal annual review of the SMS by the SRB (or equivalent)
- regular monitoring of safety performance against stated safety objectives
- identifying hazards, and employing appropriate controls and defences in a timely manner
- reactive evaluations, following incidents, accidents or investigations, to verify the effectiveness of controls and defences.

Feedback Mechanisms for Continuous Improvement

Feedback methods employed to determine and measure whether the continuous improvement process is effective may include:

- internal safety audits
- regular internal and external (third party) safety surveys
- evaluation of individual performance to verify safety responsibilities
- tracking organisational changes to ensure they are relevant and effective
- regular SAG or safety committee meetings to provide high-level SMS review details to the SRB for consideration.

Review and Follow-up

The organisation should have a means for ensuring follow-up from feedback mechanisms is reviewed and considered by the safety committee or the safety manager to ensure issues raised are addressed to the SRB (or equivalent).

Any incorporated improvement processes included in the organisation's SMS should be communicated to all personnel.

Following review, the organisation should ensure that any amendments or additions to the SMS are monitored and evaluated for ongoing effectiveness. The organisation should provide a means for ensuring that evidence of improvements are documented as a part of the continual improvement process.

5.6 Safety Promotion

5.6.1 Introduction

A safety management system should have a safety promotion system, which includes SMS training and education, and SMS safety communication.

Safety training – is related to, but different from, safety promotion. An operator should ensure that their personnel are trained and competent to perform their roles within the SMS, and that the training programs are 'tailored' to suit the needs and complexity of the organisation.

Safety promotion – assists in setting the SMS tone and aids in building a robust safety culture. Safety promotion communicates the lessons learned, safety information, safety procedures, and key safety messages from senior management that can also assist the organisation to foster improved safety performance.

5.6.2 Training and Education

Providing appropriate safety training to all personnel demonstrates management commitment to providing an effective SMS. The organisation should have a means to ensure that the key function of SMS training is to create awareness of the SMS and all personnel's involvement within the system (including both internal and external personnel). The organisation's SMS training program should:

- focus on the identification and reduction of hazards in the system, and the significance of the human component in achieving this
- ensure personnel are trained and competent to perform their SMS duties
- have a scope that is appropriate to the individual personnel involved in the organisation's SMS
- include the conduct of a Training Needs Analysis (TNA)
- include an SMS Induction Course
- include SMS recurrent training
- maintain continuous improvement and review of the SMS courses

Depending on the size and complexity of the organisation, the SMS training may include:

- SMS training for all personnel, and where possible third party service providers
- SMS training aimed at the safety responsibilities of key personnel and other senior management
- specific safety training and SMS training for operational personnel
- specific safety training for safety specialists.

Training Needs Analysis (TNA)

In order for the organisation to develop an internal SMS training program, the organisation should have undertaken a Training Needs Analysis (TNA) to determine what level of SMS training is required.

SMS Induction Course

The organisation should have a means for ensuring that all personnel, including safety-critical personnel, operational personnel, supervisors, managers and senior management within the organisation, take part in an SMS induction course and recurrent SMS training.

The organisation should ensure that their SMS induction course is made available to third party contractors, part-time employees and temporary workers who are conducting activities related to the organisation's operations.

SMS Recurrent Training

The organisation should be able to demonstrate that they have an ongoing program of SMS training for all employees.

While the training doesn't necessarily have to be the same as the SMS induction training, the organisation's recurrent training should cover:

- a review of the organisation's SMS principles
- hazard identification, assessment and mitigation
- hazard reporting
- review of safety occurrences and reports
- any changes or improvements to the organisation's SMS
- evaluating if safety objectives have been met
- HF&NTS principles.

Continuous Improvement

The organisation should demonstrate that information gathered from various feedback mechanisms, such as critiques and surveys, is used to regularly amend and review future courses. This process should form part of the continuous improvement cycle of the organisation's SMS.

5.6.3 SMS Safety Communication

The organisation's ongoing safety promotion and communication program should ensure that the personnel benefit from safety lessons learned and continue to understand the organisation's SMS.

Safety communication is essential to maintaining two-way communication, ensuring that all staff are informed and that their feedback is captured and acted upon where appropriate.

At a minimum safety communication should:

- ensure all staff are aware of the organisations SMS
- convey safety critical information
- explain why particular actions are taken
- explain why safety procedures are introduced or changed.

The organisation may also use safety communication as a valuable tool to communicate 'good to know' safety principles and information to staff.

The organisation should have methods to achieve safety communication including:

- standards for safety communication
- the delivery of safety communication
- the feedback and review loops for safety communication.

Standards for Safety Communication

All methods of safety communication require competence, skill and experience in order to be effective. The organisation should provide a means for their senior management personnel to determine the best methods for getting the SMS message across as a part of the organisation's safety strategy.

The organisation should have a means to ensure, through effective communication, that all personnel are aware of the SMS to a degree commensurate with their positions.

The organisation should have a means to ensure they use their safety communication processes to highlight relevant hazard reporting outcomes, recommendations from safety meetings, internal investigations, and to highlight various improvements to the SMS (for example why particular safety actions are taken, why safety procedures are introduced or changed).

Safety communication is closely linked with safety training and spreading information. Therefore, the organisation should base safety topics on the experience of past events and incidents, hazards or potential hazards raised by recent hazard analyses, and observations from routine internal safety audits.

Where appropriate, the organisation may have a means for sending some safety-related outcomes or information to third party contractors or customers in order to highlight the organisation's commitment to improving safety.

Safety Promotion Delivery

The organisation may deliver safety communication and promotion internally through various methods, such as:

- SMS training courses
- a safety newsletter or bulletin
- posters
- DVDs
- a safety 'stand-down' day
- workshops and/or seminars.

Safety Communication Feedback and Review

In order to be effective, safety communication should be a 'two-way' process. The organisation should provide a means for managers to convey safety messages, and for personnel to be able to voice their concerns and have them acted upon so that the feedback loop is closed. Various methods may be used to achieve this, such as:

- surveys

- questionnaires
- observations
- interviews.

As part of the continual improvement process the organisation should have a means to evaluate whether the current communication processes are being received, and are relevant and understood.

The organisation should have a means to ensure safety communication content and methodologies are reviewed in response to feedback.

The organisation should have a means for ensuring that safety-related outcomes are widely published. It is essential that the operator publishes safety-related outcomes raised through the hazard and risk reporting process. This ensures that safety messages communicated and promoted by the organisation are widely read, understood and acted upon.

5.7 Flight Data Analysis Program (FDAP)

5.7.1 Introduction

The FDAP is a useful tool for operators to proactively and predictively identify safety hazards, and to mitigate the associated risks by allowing an operator to compare their standard operating procedures (SOPs) with those actually carried out during flight. The key to a successfully implemented FDAP within the organisation's SMS is the review of data to ensure current procedures and processes remain relevant or require change due to operational considerations.

5.7.2 Flight Data Analysis Program (FDAP)

Operator's conducting authorised air transport operations in aeroplanes with a MTOW of more than 27,000kg and/or rotorcraft with a MTOW of more than 7,000kg, or a maximum operational seat configuration of more than 9 seats require an FDAP.

The FDAP should form an integral part of the organisation's SMS. Normally the FDAP would be located, as a stand-alone element, within the safety assurance component of the SMS.

The organisation's FDAP should be non-punitive and de-identify the person who is the source of the data, while ensuring data gathered is secure. A feedback loop, which should be a part of the SMS, will allow timely corrective action to be taken where safety may be compromised by significant deviation from SOPs.

In determining the appropriateness of the organisation's FDAP, consideration should be given to how the organisation:

- will implement their FDAP
- will integrate the FDAP with their SMS
- will ensure the FDAP process is clearly documented within their SMS manual.

5.7.3 FDAP Implementation

The organisation's FDAP may be implemented by the operator or a third party service provider deemed an appropriate person.

If the FDAP is provided by a third party the organisation should have a means for acknowledging and retaining responsibility for the provision of the program and its effectiveness.

FDAP & SMS Integration

To maximise safety benefits the organisation must ensure that the FDAP is integrated seamlessly within their SMS.

The organisation may use the FDAP operational data provided by the program to provide objective quantitative information to support investigations that would otherwise be based on subjective reports.

The organisation should have a means for ensuring operational data provided by the FDAP is regularly analysed and recorded in support of improving flight operations, and, as a direct consequence, improving the SMS.

Documentation

The FDAP process should be clearly documented within the organisation's SMS manual.

The FDAP process should clearly outline:

- the aim of the program
- the data access and security policy, which restricts information to specifically authorised persons - identified by their position
- the method used to obtain de-identified crew feedback on those occasions that require specific flight follow-up for contextual information
- the data retention policy and accountability, including the measures taken to ensure the security of the data
- the policy highlighting instances where the identity of the person who is the source of the data may be disclosed, such as:
  - where the source provides written consent
  - where a court order has been provided.
- the conditions under which advisory briefing or remedial training should take place
- the conditions under which punitive action will not occur in relation to the data, unless the person has:
  - deliberately contravened a provision of civil aviation legislation or the organisation's exposition
  - persistently engaged in unsafe actions without appropriate safety reasons.
- the participation of flight crew member representatives in the assessment of the data, the action and review process, and the consideration of recommendations
- the policy for the publishing the findings resulting from the FDAP, in order to improve the organisation's flight safety program and SMS.

For further information regarding FDAP refer to CAAP SMS-4(0) – Guidance on the establishment of a flight data analysis program.

5.8 SMS or HF&NTS Program Amendment Process

CASA inspectors who assess and approve an operator's application for an SMS or HF&NTS program which incorporates an amendment process should:

- check the mandatory items in the proposed amendment process, in accordance with Order 82.3 or 82.5 of the CAO's (as applicable to the operator). The application should be considered in light of the operator's experience with SMS and the preparation of safety-cases. These things should be taken into account in forming a view of whether or not the operator's proposed amendment process is likely to maintain or increase the safety levels provided by the changes suggested to the SMS or HF&NTS program.
- consider if the proposed amendment process would not be likely to have an adverse effect on the safety of air navigation [regulation 11.055 (1A) (e) of CASR]
- consider if the amendment process has the capacity, through documented procedures, to identify and record reliable information from which a reasoned and persuasive safety-case may be developed
- consider if the procedure only allows the operator to make an amendment to the SMS or HF&NTS program if the proposed amendment will obviously enhance safety of air navigation or are minor editorial changes
- check that the SMS amendment process prevents the changing of data which might be used to generate a safety-case for a proposed SMS amendment

Things for consideration:

- The amendment process should include a need to describe the precise objectives that the operator aims to achieve by making an SMS amendment or HF&NTS program.
- CASA considers that a safety-case, derived from existing SMS processes including hazard identification, risk assessment and mitigation, should be used to justify amendments unless the amendment is merely editorial, or it will obviously enhance safety (for example, by lowering the level of residual risk which requires CEO sign-off or adding a new topic to the HF&NTS training program syllabus)
- The operator's use of these methods, in conjunction with the ALARP principle to assess the impact of a proposed amendment, could potentially meet the requirement for adequate risk analysis, provided it has previously been found to be satisfactory.
- The operator's procedure should consider whether a proposed amendment is likely to achieve at least the equivalent risk mitigation effect and, therefore, the same level of safety.
- The amendment process should include a documented procedure to ensure that, once implemented, each amendment would be formally monitored and reviewed, in accordance with the continuous improvement element of the operator's SMS, to confirm that:
  - the original objective was met; and
  - there were no unintended outcomes or consequences having, or likely to have, a detrimental effect on the safety level provided by the SMS or HF&NTS program.

- The assessing officer should consider the operator's history of maintaining an effective SMS, as well as the operator's demonstrated ability to prepare sound safety-cases. The assessing officer should look at previous safety-cases developed by the operator in order to determine the accuracy and depth of these.
- An evaluation of Sky Sentinel's Safety Risk Indicators for the operator should also be conducted with particular emphasis on safety management risks.
- The amendment process should include a description of what may, and may not, be amended by the amendment process without CASA approval.
- The amendment process should describe the stakeholder consultation that the operator will undertake before the amendment is finally signed-off.
- The amendment process should include a description of the roles and seniority levels of personnel within the organisation who must approve a proposed amendment.
  For example, an operator may describe an undertaking to consider any SMS amendment proposed by the operator's Safety Committee or SRB, but then require the Safety Manager to endorse the proposed amendment before the CEO would formally approve the amendment.
- Notifications to CASA of amendments should include evidence, for example the safety-case, that supports the operator's identification that the amendment is likely to maintain or increase safety levels.
  If the procedure does not require this, it may still be acceptable provided experience with the operator is such that they have been forthcoming in the disclosure of information or justifications for decisions they have made.
- Amendments of a minor or editorial nature may be notified 'in bulk' at regular intervals (for example, every 3 months). However, CASA expects that the operator would make notification of any substantial amendment as soon as possible after it has been made (for example, within 7 days).
- An operator may wish to combine an SMS and HF&NTS program amendment process under the one process contained in their SMS.

Questions related to evaluating the SMS or HF&NTS Program Amendment Process:

When assessing an SMS or HF&NTS amendment process the following questions should all be answered 'yes':

Q1. Does the amendment process allow for changes if the proposed amendment is either:

- a simple editorial change
- based on a well-constructed safety-case
- obvious that it will enhance safety?

Q2. Does the amendment process include a documented procedure for the approval of an amendment to the SMS or HF&NTS program?

Q3. Does the amendment process have documented procedures allowing for a proposed change to identify and record reliable information that is used to construct a safety-case?

Q4. If a safety-case is used as the basis for a proposed amendment, does it demonstrate that the amendment is likely to maintain at least the same, or increase, the level of safety above that which existed under the SMS at the time of the proposed amendment?

Q5. For an SMS amendment process— does the SMS amendment process prevent changing any SMS data which might be used to generate a safety-case for a proposed SMS amendment?

Q6. Does the amendment process include a documented procedure to ensure that an approved amendment is incorporated into all versions of the SMS or HF&NTS documentation that is then communicated to relevant personnel?

Q7. Does the amendment process include a documented procedure to ensure that once an amendment is approved within the organisation the operator notifies CASA?

Q8. Does the amendment process specify the timeframe within which the operator will notify CASA of amendments?

Q9. Does the amendment process include an amendment recording process to ensure that the current version of the document can be easily identified?

5.9 Issuing the Approval

5.9.1 Introduction

The SMS or HF&NTS program amendment process must be approved in the form of a new approval under Order 82.3 or 82.5 of the CAO's.

Approval instrument templates, which make provision for amendments without CASA approval (in accordance with the operator's approved amendment process and associated conditions), are available from the CASA Legal Services Branch.

Once an approval instrument has been prepared for an operator, the draft approval instrument must be reviewed and found acceptable by the CASA Legal Services Branch before it is signed by the delegate. This requirement may be lifted in the future.

5.9.2 Other Guidance

Modifications to an Approved Amendment Process

An operator must not unilaterally change any aspect of an amendment process once it has been approved by CASA. Modifications to the amendment process require CASA's assessment and approval.

A modification that is proposed to the amendment process should have a safety-case prepared by the operator that indicates that an acceptable level of safety can be achieved. If CASA assesses that the modification is satisfactory, CASA must re-issue the operator's SMS or HF&NTS program approval (as applicable).

5.8.1.2.2 SMS and HF&NTS Program Amendments without an Approved Process

It should be noted that the absence of an approved SMS or HF&NTS program amendment process does not relieve an operator of their obligation to maintain an effective SMS or HF&NTS program.

However an operator who does not have an approved amendment process must apply to CASA for approval to amend any aspect of their SMS or HF&NTS program. CASA requires that an operator in this position will provide sufficient justification for the proposed amendment, within the context of a specific safety-case, before the amendment is assessed.

An operator with an approved amendment process is able to make certain changes without further CASA approval.