



# Advisory Circular

NCAA-AC: SMS 002  
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Nigerian Civil Aviation Authority  
(NCAA)

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## **GUIDANCE ON THE DEVELOPMENT OF AN SMS MANUAL**

### **1. GENERAL:**

- 1.1. **Purpose:** *This Advisory Circular serves to guide organizations in the development and compilation of a top-level SMS manual (or document) to define their SMS framework and its associated elements. The manual can be a stand-alone SMS manual or be integrated as a consolidated SMS section/chapter within an appropriate approved manual of the organization (e.g. the organization's exposition manual or company manual). The actual configuration may depend on regulatory expectation.*
- 1.2. *Using the suggested format and content items in this appendix and adapting them as appropriate is one way in which an organization can develop its own top-level SMS manual. The actual content items will depend on the specific SMS framework and elements of the organization. The description under each element will be commensurate with the scope and complexity of the organization's SMS processes.*
- 1.3. *The manual will serve to communicate the organization's SMS framework internally as well as with relevant external organizations. The manual may be subject to endorsement or approval by the CAA as evidence of the acceptance of the SMS.*

**Note:** *A distinction is to be made between an SMS manual and its operational supporting records and documents. The latter refers to historical and current records and documents generated during implementation and operation of the various SMS processes. These are documentary evidence of the ongoing SMS activities of the organization.*

## **2. FORMAT OF THE SMS MANUAL:**

- 2.1 *The SMS manual may be formatted in the following manner:*
- a) *Section heading;*
  - b) *Objective;*
  - c) *Criteria;*
  - d) *Cross-reference documents.*
- 2.2 *Below each numbered “section heading” is a description of the “objective” for that section, followed by its “criteria” and “cross-reference documents”. The “objective” is what the organization intends to achieve by doing what is described in that section. The “criteria” defines the scope of what should be considered when writing that section. The “cross-reference documents” links the information to other relevant manuals or SOPs of the organization which contain details of the element or process as applicable.*

## **3. CONTENTS OF THE MANUAL:**

- 3.1 *The contents of the manual may include the following sections:*
1. *Document Control;*
  2. *SMS Regulatory Requirements;*
  3. *Scope and integration of the Safety Management System;*
  4. *Safety Policy;*
  5. *Safety Objectives;*
  6. *Safety Accountabilities and Key Personnel;*
  7. *Safety Reporting and Remedial Actions;*
  8. *Hazard Identification and Risk Assessment;*
  9. *Safety Performance Monitoring and Measurement;*
  10. *Safety-related Investigations and Remedial Actions;*
  11. *Safety Training and Communication;*
  12. *Continuous Improvement and SMS audit;*
  13. *SMS Records Management;*
  14. *Management of Change; and*
  15. *Emergency/Contingency Response Plan.*
- 3.2 *Below is an example of the type of information that could be included in each section using the format prescribed in 2.2.*

## **1. Document control;**

*Objective;*

*Describe how the manual(s) will be kept up to date and how the organization will ensure that all personnel involved in safety-related duties have the most current version.*

*Criteria;*

- a) Hard copy or controlled electronic media and distribution list.*
- b) The correlation between the SMS manual and other existing manuals such as the Maintenance Control Manual (MCM) or the Operations Manual.*
- c) The process for periodic review of the manual and its related forms/documents to ensure their continuing suitability, adequacy and effectiveness.*
- d) The manual's administration, approval and regulatory acceptance process.*

*Cross-reference documents; Quality manual, engineering manual, etc.*

## **2. SMS regulatory requirements**

*Objective;*

*Address current SMS regulations and guidance material for necessary reference and awareness by all concerned.*

*Criteria;*

- a) Spell out the current SMS regulations/standards. Include the compliance timeframe and advisory material references as applicable.*
- b) Where appropriate, elaborate on or explain the significance and implications of the regulations to the organization.*
- c) Establish a correlation with other safety-related requirements or standards where appropriate.*

*Cross-reference documents;*

*SMS regulation/requirement references, SMS guidance document references, etc.*

## **3. Scope and integration of the safety management system**

*Objective;*

*Describe the scope and extent of the organization's aviation-related operations and facilities within which the SMS will apply. The scope of the processes, equipment and operations deemed eligible for the organization's hazard identification and risk management (HIRM) programme should also be addressed.*

*Criteria;*

- a) Spell out the nature of the organization's aviation business and its position or role within the industry as a whole.*
  - b) Identify the major areas, departments, workshops and facilities of the organization within which the SMS will apply.*
  - c) Identify the major processes, operations and equipment which are deemed eligible for the organization's HIRM programme, especially those which are pertinent to aviation safety. If the scope of the HIRM-eligible processes, operations and equipment is too detailed or extensive, it may be controlled under a supplementary document as appropriate.*
  - d) Where the SMS is expected to be operated or administered across a group of interlinked organizations or contractors, define and document such integration and associated accountabilities as applicable.*
  - e) Where there are other related control/management systems within the organization, such as QMS, OSHE and SeMS, identify their relevant integration (where applicable) within the aviation SMS.*
- Cross-reference documents; Quality manual, engineering manual, etc.*

#### **4. Safety policy**

*Objective;*

*Describe the organization's intentions, management principles and commitment to improving aviation safety in terms of the product or service provider. A safety policy should be a short description similar to a mission statement.*

*Criteria;*

- a) The safety policy should be appropriate to the size and complexity of the organization.*
- b) The safety policy states the organization's intentions, management principles and commitment to continuous improvement in aviation safety.*
- c) The safety policy is approved and signed by the accountable executive.*
- d) The safety policy is promoted by the accountable executive and all other managers.*
- e) The safety policy is reviewed periodically.*
- f) Personnel at all levels are involved in the establishment and maintenance of the safety management system.*
- g) The safety policy is communicated to all employees with the intent that they are made aware of their individual safety obligations.*

*Cross-reference documents; OSHE safety policy, etc.*

## **5. Safety objectives**

*Objective;*

*Describe the safety objectives of the organization. The safety objectives should be a short statement that describes in broad terms what the organization hopes to achieve.*

*Criteria;*

- a) The safety objectives have been established.*
- b) The safety objectives are expressed as a top-level statement describing the organization's commitment to achieving safety.*
- c) There is a formal process to develop a coherent set of safety objectives.*
- d) The safety objectives are publicized and distributed.*
- e) Resources have been allocated for achieving the objectives.*
- f) The safety objectives are linked to safety indicators to facilitate monitoring and measurement where appropriate.*

*Cross-reference documents; Safety performance indicators document, etc.*

## **6. Roles and responsibilities**

*Objective;*

*Describe the safety authorities, responsibilities and accountabilities for personnel involved in the SMS.*

*Criteria;*

- a) The accountable executive is responsible for ensuring that the safety management system is properly implemented and is performing to requirements in all areas of the organization.*
- b) An appropriate safety manager (office), safety committee or safety action groups have been appointed as appropriate.*
- c) Safety authorities, responsibilities and accountabilities of personnel at all levels of the organization are defined and documented.*
- d) All personnel understand their authorities, responsibilities and accountabilities with regard to all safety management processes, decisions and actions.*
- e) An SMS organizational accountabilities diagram is available.*

*Cross-reference documents; Company exposition manual, SOP manual, administration manual, etc.*

## **7. Safety reporting**

*Objective;*

*A reporting system should include both reactive (accident/incident reports, etc.) and proactive/predictive (hazard reports). Describe the respective reporting systems. Factors to consider include: report format, confidentiality, addressees, investigation/evaluation procedures, corrective/preventive actions and report dissemination.*

*Criteria;*

- a) The organization has a procedure that provides for the capture of internal occurrences including accidents, incidents and other occurrences relevant to SMS.*
- b) A distinction is to be made between mandatory reports (accidents, serious incidents, major defects, etc.), which are required to be notified to the CAA, and other routine occurrence reports, which remain within the organization.*
- c) There is also a voluntary and confidential hazard/occurrence reporting system, incorporating appropriate identity/data protection as applicable.*
- d) The respective reporting processes are simple, accessible and commensurate with the size of the organization.*
- e) High-consequence reports and associated recommendations are addressed to and reviewed by the appropriate level of management.*
- f) Reports are collected in an appropriate database to facilitate the necessary analysis.*

*Cross-reference documents;*

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## **8. Hazard identification and risk assessment**

*Objective;*

*Describe the hazard identification system and how such data are collated. Describe the process for the categorization of hazards/risks and their subsequent prioritization for a documented safety assessment. Describe how the safety assessment process is conducted and how preventive action plans are implemented.*

*Criteria;*

- a) Identified hazards are evaluated, prioritized and processed for risk assessment as appropriate.*
- b) There is a structured process for risk assessment involving the evaluation of severity, likelihood, tolerability and preventive controls.*
- c) Hazard identification and risk assessment procedures focus on aviation safety as their fundamental context.*

- d) *The risk assessment process utilizes worksheets, forms or software appropriate to the complexity of the organization and operations involved.*
- e) *Completed safety assessments are approved by the appropriate level of management.*
- f) *There is a process for evaluating the effectiveness of the corrective, preventive and recovery measures that have been developed.*
- g) *There is a process for periodic review of completed safety assessments and documenting their outcomes.*

*Cross-reference documents;*

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### **9. Safety performance monitoring and measurement**

*Objective;*

*Describe the safety performance monitoring and measurement component of the SMS. This includes the organization's SMS safety performance indicators (SPIs).*

*Criteria;*

- a) *The formal process to develop and maintain a set of safety performance indicators and their associated performance targets.*
- b) *Correlation established between the SPIs and the organization's safety objectives where applicable and the process of regulatory acceptance of the SPIs where required.*
- c) *The process of monitoring the performance of these SPIs including remedial action procedure whenever unacceptable or abnormal trends are triggered.*
- d) *Any other supplementary SMS or safety performance monitoring and measurement criteria or process.*

*Cross-reference documents;*

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### **10. Safety-related investigations and remedial actions**

*Objective;*

*Describe how accidents/incidents/occurrences are investigated and processed within the organization, including their correlation with the organization's SMS hazard identification and risk management system.*

*Criteria;*

- a) *Procedures to ensure that reported accidents and incidents are investigated internally.*

- b) *Dissemination of completed investigation reports internally as well as to the NCAA as applicable.*
- c) *A process for ensuring that corrective actions taken or recommended are carried out and forevaluating their outcomes/effectiveness.*
- d) *Procedure on disciplinary inquiry and actions associated with investigation report outcomes.*
- e) *Clearly defined conditions under which punitive disciplinary action would be considered (e.g.illegal activity, recklessness, gross negligence or wilful misconduct).*
- f) *A process to ensure that investigations include identification of active failures as well ascontributing factors and hazards.*
- g) *Investigation procedure and format provides for findings on contributing factors or hazards to beprocessed for follow-up action by the organization's hazard identification and risk managementsystem where appropriate.*

*Cross-reference documents;*

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## **11. Safety training and communication**

*Objective;*

*Describe the type of SMS and other safety-related training that staff receive and the process forassuring the effectiveness of the training. Describe how such training procedures are documented.Describe the safety communication processes/channels within the organization.*

*Criteria;*

- a) *The training syllabus, eligibility and requirements are documented.*
- b) *There is a validation process that measures the effectiveness of training.*
- c) *The training includes initial, recurrent and update training, where applicable.*
- d) *The organization's SMS training is part of the organization's overall training programme.*
- e) *SMS awareness is incorporated into the employment or indoctrination programme.*
- f) *The safety communication processes/channels within the organization.*

*Cross-reference documents;*

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## **12. Continuous improvement and SMS audit**

Objective;

*Describe the process for the continuous review and improvement of the SMS.*

Criteria;

- a) The process for regular internal audit/review of the organization's SMS to ensure its continuingsuitability, adequacy and effectiveness.*
- b) Describe any other programmes contributing to continuous improvement of the organization's SMSand safety performance, e.g. MEDA, safety surveys, ISO systems.*

Cross-reference documents;

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## **13. SMS records management**

Objective;

*Describe the method of storing all SMS-related records and documents.*

Criteria;

- a) The organization has an SMS records or archiving system that ensures the retention of all recordsgenerated in conjunction with the implementation and operation of the SMS.*
- b) Records to be kept include hazard reports, risk assessment reports, safety action group/safetymeeting notes, safety performance indicator charts, SMS audit reports and SMS training records.*
- c) Records should be traceable for all elements of the SMS and be accessible for routineadministration of the SMS as well as internal and external audits purposes.*

Cross-reference documents;

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## **14. Management of change**

Objective;

*Describe the organization's process for managing changes that may have an impact on safety risksand how such processes are integrated with the SMS.*

Criteria;

- a) Procedures to ensure that substantial organizational or operational changes take intoconsideration any impact which they may have on existing safety risks.*

- b) Procedures to ensure that appropriate safety assessment is performed prior to introduction of new equipment or processes which have safety risk implications.*
- c) Procedures for review of existing safety assessments whenever there are changes to the associated process or equipment.*

*Cross-reference documents; Company SOP relating to management of change, etc.*

### **15. Emergency/contingency response plan**

*Objective;*

*Describe the organization's intentions regarding, and commitment to dealing with, emergency situations and their corresponding recovery controls. Outline the roles and responsibilities of key personnel. The emergency response plan can be a separate document or it can be part of the SMS manual.*

*Criteria (as applicable to the organization);*

- a) The organization has an emergency plan that outlines the roles and responsibilities in the event of a major incident, crisis or accident.*
- b) There is a notification process that includes an emergency call list and an internal mobilization process.*
- c) The organization has arrangements with other agencies for aid and the provision of emergency services as applicable.*
- d) The organization has procedures for emergency mode operations where applicable.*
- e) There is a procedure for overseeing the welfare of all affected individuals and for notifying next of kin.*
- f) The organization has established procedures for handling the media and insurance-related issues.*
- g) There are defined accident investigation responsibilities within the organization.*
- h) The requirement for preservation of evidence, securing the affected area, and mandatory/governmental reporting is clearly stated.*
- i) There is emergency preparedness and response training for affected personnel.*
- j) A disabled aircraft or equipment evacuation plan has been developed by the organization in consultation with aircraft/equipment owners, aerodrome operators or other agencies as applicable.*
- k) A procedure exists for recording activities during an emergency response.*

*Cross-reference documents;*