NAMIBIA CIVIL AVIATION AUTHORITY

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Advisory Pamphlet (AP)

ANSSO-GEN-AP170/01

ESTABLISHMENT OF AN INTERNAL QUALITY SYSTEM

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3. Effective date: 13 May 2020

NAMIBIA CIVIL AVIATION AUTHORITY
NCAA
13 MAY 2020
PRIVATE BAG 12005
AUSSPANNPLATZ
WINDHOEK
OFFICE OF THE EXECUTIVE DIRECTOR

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ESTABLISHMENT OF AN INTERNAL QUALITY SYSTEM

1. PURPOSE

This Advisory Pamphlet (AP) provides information and guidance to ANS providers in establishing a quality system that is acceptable to the NCAA to meet the requirements of the under NAMCAR Part 170.

2. BACKGROUND

(a) NAM-CAR Part 170 require operators/organisations to establish a quality management system that is consistent with the services it provides and in accordance with approved performance standards.

(b) NAMCAR Part 170 further requires ANS providers to establish a quality assurance system for the control, supervision and the management of the services that they provide.

(c) Below are the extracts from the regulations to which this Advisory Pamphlet apply.

3. EXTRACTS FROM NAMCAR PART 170

170.04.9 Quality Management System

(1) An ANS provider must establish a quality management system that is acceptable to the Executive Director and which;

(a) focuses on the consistent delivery of each air navigation service it provides;

(b) complies with approved quality performance standards;

(c) includes a quality assurance system for the control, supervision and the management of the air navigation service that it provides; and

(d) complies with standards prescribed under the relevant part of the ANS Parts.

(2) The quality management system established under this Part may be integrated with the safety management system required under this Part.

ESTABLISHMENT OF AN INTERNAL QUALITY SYSTEM

1. INTRODUCTION

1.1 The quality system required by the civil aviation regulations enables an operator or organisation to monitor compliance with relevant regulations and standards specified under the NAM-CARs. The quality system also enables the operator or organisation to monitor its compliance with its own standards and the procedures specified in its manual of procedure/operations.

1.2 The Civil Aviation Regulations recognise that the International Organization for Standardization (ISO) 9000 series of quality assurance standards provide a basic framework for the development of a quality assurance. While not mandatory an ISO 9001 certificate, issued by an appropriately accredited organization, will be considered a sufficient means of compliance with quality standards.

1.3 The ISO 9001 standards provide a sound basis upon which to achieve ISO certification with its attendant benefits. The development, implementation, and maintenance of the elements of the ISO standard is a means of promoting and improving aviation safety and therefore provides an environment in which aviation can operate safely.

1.4 A successfully implemented quality system will ensure that processes in place provide for personnel to possess the necessary competencies required to perform specific assigned functions. The Operator/organisation should ensure that within the context of the established quality management system the competencies and the associated knowledge, skills and abilities required for

each function is identified, and personnel assigned to perform those functions are appropriately trained. An operator/organisation must be able to demonstrate through initial and periodic assessments of the qualifications and competency of personnel and have documented records of such assessments.

1.5 Within the context of a quality system, policies, processes and procedures must be in place to ensure that the results of periodic assessments of personnel can be used by the operator/organisation as a means to detect and correct shortfalls. Implementation of the quality management system will provide the operator/organisation with the necessary mechanisms to monitor its internal processes and procedures and identify any anomalies and their root causes.

1.6 An established quality management system must provide the users of services with the necessary confidence that the services being received meet the required level of safety and that information received is consistent with standards of accuracy and integrity. To this end, an operator/organisation must put in place appropriate measures to monitor compliance with applicable standards and take necessary steps to ensure that where nonconformities are identified, corrective action is taken to address the root causes.

2. GENERAL INFORMATION

2.1 Quality management system: A quality management system is the documented internal activities and management functions of an organisation that determines the quality policy, objectives, responsibilities and their implementation through quality planning, quality control, quality assurance and quality improvement.

2.2 Quality manual: This is the document that describes the organisation's quality system and states the organisation's policy on, and commitment to quality. It serves as the reference point for reviewing and evaluating an organisation's quality system during audits.

2.3 **Quality policy:** A formal written statement that commits the Accountable Manager on behalf of the organisation to what the quality system is intended to achieve. The quality statement should reflect the intended achievement and continued compliance with the civil aviation regulations.

2.4 **Quality assurance programme**:

(a) This is a programme that includes all planned and systematic actions necessary to provide confidence that all operations and maintenance are conducted in accordance with all applicable requirements, standards and operational procedures. Quality inspections, quality audits and management evaluations are the principle components of a quality assurance programme.

(b) An operator/organisation should establish a schedule of audits to be completed during a specific calendar period. All aspects of the operation should be reviewed within every period of 12 months in accordance with the programme. An operator/organisation may increase the frequency of audits if so desired.

2.5 **Controls:** Management and operational techniques, activities, and procedures that monitor the satisfactory performance of the internal quality assurance procedures, including the organisation's operating processes and procedures. Reviews, in process tests, checklists, spot checks, inspections and audits are all examples of Controls. As part of an internal quality audit or review, the controls of the area being evaluated should be verified and tested.

2.6 **Evidence** A documented statement of fact that is based on observations, measurements, or tests that can be verified.

2.7 **Finding** A conclusion, supported by objective evidence that demonstrates non-compliance with a specific standard. A finding will generate a Corrective or Preventive Action.

2.8 **Concern** A concern is a conclusion, supported by objective evidence, that does not demonstrate a finding, but rather a condition that may become a finding. A concern may generate a Preventive Action.

2.9 **Root cause** The root cause is the underlying organisational cause, or causes, of any finding or concern. A root cause is always identified with a process, a procedure, methodology, or an organisation's structure or practices. In the analysis of safety, quality, or operational problems, the root cause, or causes, should be determined before any corrective action is planned. Often the root cause is not obvious. Consequently, a careful and considered analysis of all processes, activities, records, reports, and other evidence associated with a failure or complaint needs to be made to ensure the corrective action(s) address not only the immediate cause but any latent or organisational problems.

2.10 Inspection

Inspection is the act of observing, measuring, testing, or gauging one or more characteristics of a particular event or action. This is to ensure that correct procedures and requirements are followed during the accomplishment of that event, or action. The primary purpose of an inspection is to verify that—

(a) established standards are followed during an observed event or action; and

(b) the end result conforms with the specified requirements of the event or action.

2.11 Audit

An audit is a methodical, planned, review used to determine how activities are being conducted, and compares results with how the activities should have been conducted according to established procedures. Audits are conducted for different purposes and have distinct identities that are defined for the purposes of this AP as:

(a) ***First party audits*** are those conducted internally by the organisation, using its own trained staff, to evaluate the organisation's, or parts of the organisation's, performance. The results are used by management

to confirm compliance with the documented standards and procedures to initiate corrective action when the standard is not met or preventive actions where there is potential for non-conformance or non-compliance. The auditor must be independent of the function, operation or group being audited. For small operators it may be necessary to engage an outside agency. The outside agency could be —

(i) another small operator;

(ii) a sub-contractor; or

(iii) a business associate.

(b) ***Second party audits*** are carried out by an organisation on its suppliers or subcontractors. These audits are intended to satisfy the contracting organisation that the subcontractor meets the agreed quality requirements.

(c) ***Third party audits*** are those carried out by independent bodies such as the Civil Aviation Authority or commercial auditing companies. They are intended to give an assurance that the organisation is in control and that the organisation's quality management system and internal quality assurance procedures are working effectively. Third party audits will confirm that non-compliances are being identified and corrected through first, or second, party audit.

2.12 Audit Construction

The various elements that comprise an effective audit are as follows:

(a) Audit preparation by the auditor(s)

(b) The opening or entry meeting:

(i) introduce the audit team and confirm the scope of the audit;

(ii) outline the audit process to be used and the schedule;

(iii) confirm the resources, people and facilities needed for the audit are aware and available for the audit.

(c) The examination:

(i) interview personnel, review documents, observe and inspect operations and select samples;

(ii) document evidence;

(iii) document findings and concerns.

(d) The closing or exit meeting:

(i) present findings and concerns;

(ii) establish a programme to close-out findings.

(e) A written audit report containing:

(i) descriptions of all the findings and observations with the supporting evidence;

(ii) the agreed corrective and preventive actions;

(iii) the schedule for follow up and the closure of the corrective and preventive actions.

2.13 Feedback system

(a) The quality system should include a feedback system to the accountable manager to ensure that corrective actions are both identified and promptly addressed. The feedback system should also specify the person required to rectify discrepancies and non-compliances in each particular case, and the procedure to be followed if corrective action is not completed within specified time limits.

(b) Any non-compliances identified as a result of monitoring should be communicated by the quality manager to the manager responsible for taking corrective action or, if appropriate, to the accountable manager. Such non compliances should be recorded for the purpose of further investigation in order to determine the cause and to enable the recommendation of appropriate corrective action.

3. Quality Management System

3.1 To comply with the approval/certification requirements, an operator/organisation seeking an approval or certification, must develop, document, implement, and maintain a quality management system with appropriate internal quality assurance procedures.

(b) a documented, approved, safety policy and plan to identify, implement, and maintain safety policy procedures that;

(i) meet the requirements of the rules;

(ii) are relevant to the applicant's organisational and business goals, and;

(iii) meets the expectations and needs of its customers; and

(c) a procedure for;

(i) corrective action to ensure existing problems that have been identified within the system are corrected, and;

(ii) for preventive action to ensure that potential causes of problems that have been identified within the system are remedied; and

(d) establish a procedure to ensure the Quality Management System and the internal quality assurance procedures are subjected to continual, regular and structured review; and

(e) an internal audit programme to audit the applicant's organisation for conformity with the procedures in its exposition and achievement of the goals set in its safety policy; and

(f) a procedure to ensure quality indicators, including defect and incident reports, and personnel and customer feedback, are monitored to identify existing problems or potential causes of problems within the system; and

(g) a records system that clearly documents what has taken place, allowing statistical analysis to monitor the continuing suitability and effectiveness of the Quality Management System and the organisation's operation. The records will be used to indicate trends to allow the organisation to—

(i) raise preventive actions to avoid potential problems, and;

(ii) determine the best goals to set for the future; and

(h) a document control procedure to manage, develop, document, change, and distribute the organisation's quality and operational procedures.

8. The Quality Assurance team or Management Representative

8.1 An organisation's internal quality assurance procedures should identify a person or a group of persons, within the organisation, that has the responsibility and authority to:

(a) develop, implement and maintain the Quality Management System;

(b) manage the organisation's internal audit programme;

(c) identify and record any findings or concerns, and the evidence necessary to confirm findings or concerns;

(d) initiate, recommend, or provide solutions to findings or concerns through consultation with the management owning the non-conforming process or activity;

(e) communicate and co-ordinate activities with external auditors

(f) analyse the root causes of concerns and findings for presentation to management for a review of trends and potential areas of concern;

(g) conduct and record regular Management Reviews to ensure corrective and preventive actions are addressed and closed out within a specific time.

8.2 The Management Representative or the Quality Assurance Team must have the delegated authority and responsibilities to allow them to work within the organisation to implement and maintain the internal quality assurance procedures. The Management Representative or the Quality Assurance Team will have a direct reporting line to the highest level of management necessary to sustain the management commitment to the organisation's Safety policy and plan.

8.3 For some organisations, operating size may justify the costs associated with the necessity of having full-time, dedicated, resources and personnel in a separate Quality Assurance Department or group. However, when full-time, dedicated, resources and personnel are not practical; the organisation should develop procedures that preclude persons directly responsible for the areas to be evaluated from participating in the selection of the audit team.

8.4 For very small organisations, an appropriate internal quality assurance procedure should consist of developing checklists and a schedule for accomplishing the check-list items. Each checklist must be signed. The operator must schedule an occasional independent review of the checklists and the checklist items.

9. Safety Policy

9.1 The organisation should establish a clear policy that safety is part of its business. It should develop procedures that reflect a commitment to safety and will promote and demonstrate a clear corporate safety culture. The policy should define a set of beliefs, norms, attitudes, roles, and social and technical practices concerned with minimising exposure of employees, managers, customers, and members of the general public to conditions considered dangerous or hazardous. The characteristics that define a safety culture and that decision-makers should observe when modelling the corporate safety culture include:

(a) senior management places strong emphasis on safety as part of the strategy of controlling risks;

(b) decision-makers and operational personnel hold a realistic view of short- and long-term hazards involved in the organisation's activities;

(c) those in top positions do not use their influence to force their views or to avoid criticism;

(d) those in top positions foster a climate in which there is a positive attitude towards criticisms, comments, and feedback from lower levels of the organisation;

(e) there is an awareness of the importance of communicating relevant safety information at all levels of the organisation – both within it and with outside entities;

(f) there is promotion of appropriate, realistic, and workable rules relating to hazards, to safety, and to potential sources of damage, with such rules being supported and endorsed throughout the organisation; and

(g) personnel are well trained and well educated and fully understand the consequences of unsafe acts.

10. Corrective and Preventive Actions

10.1 Corrective Actions

Internal quality assurance procedures should include a procedure to ensure that corrective actions are developed in response to findings or concerns. The procedure should include:

(a) recording the corrective action;

(b) the allocation and acceptance of ownership;

(c) monitoring each corrective action to verify timely and effective implementation and completion;

(d) test that the corrective action is long-term and ensures the issue does not recur;

(e) regular reviews of root causes of all corrective actions.

10.2 Preventive Actions

The preventive action procedure is identical to the corrective action procedure. The only difference is that preventive action anticipates and corrects potential failures. Often a corrective action will generate one or more, associated, preventive actions to ensure a complete and long-term fix.

11. Management Review

Management must, at regular intervals, review—

(a) the internal quality assurance procedures, the quality indicators, and inspection and test results to verify the Quality Management System is working;

(b) that the corrective and preventive actions have been recorded, implemented, and closed out;

(c) that the operation and quality assurance programmes are under constant review and improvement.

(d) The organisation must prepare and conduct a programme to regularly review all company policies, processes, and procedures. The review should be carried out by dedicated staff. It will encompass all the activities, procedures, and processes of the organisation. The programme should be a comprehensive and continual process that considers the following:

(i) The overall effectiveness of the organisation in achieving its stated objectives.

(ii) The ability of the internal quality assurance and the operational procedures to respond to new technologies, to market strategies, to legislative or regulatory changes, and to social or environmental conditions.

(iii) Are the current processes and procedures up-to-date, effective, and relevant?

(e) For the purposes of this procedure, the term management means the team or person who has the authority to resolve issues and take action.

(f) The management reviews with supporting documents will be recorded. The organisation will determine and document, as a quality assurance procedure, the frequency, format, and structure for informing management of internal quality assurance plans, trends, results, and follow-up actions. The procedure will define the responsibilities and the independence of personnel who perform or supervise the management reviews.

12. The Audit Programme

12.1 A mandatory element of the Quality Management System is the organisation's audit programme. The Audit internal quality assurance procedure will:

(a) define the audit types and associated procedures;

(b) maintain and manage a cyclic schedule of audits;

(c) manage the review, reporting, and close-out of findings and concerns;

(d) identify the personnel to conduct the audit;

(e) provide training for the audit personnel

12.2 Planned Audits

Planned Audits is an audit that will be performed during a set calendar period. To facilitate and ensure the audit is thorough, divide the organisation into audit components based on the organisation's operational or functional structure. Dependant on the size of the organisation the audit cycle might be greater than one year; however, eighteen months is the maximum. Schedule the audit within each component to allow enough flexibility for resources to be committed.

12.3 Special Audits or Spot Checks

Conduct special audits, or spot checks, based on concerns or priorities identified by the organisation, external audits, or customer complaints. Schedule special audits, or spot checks, based on a review of the organisation's or industry, trends.

12.4 External Audits

External audits are initiated and conducted by agencies with a regulatory interest in the operation of the organisation. For example, but not limited to, the Civil Aviation Authority, Occupational Safety and Health, and the Inland Revenue Department. The content and focus of an organisation's internal and special audits will be largely determined by the need to anticipate or respond to the requirements and findings of the external audits.

13. Quality Indicators

Each organisation will develop measure and monitor their own quality indicators. Some examples of typical quality indicators are:

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CIRCULATION LIST

DATE: 12TH MAY 2020

SUBJECT: Advisory Pamphlet ANSSO-GEN-AP 170/01
Advisory Pamphlet ANSSO-GEN-AP 170/02
Advisory Pamphlet ANSSO-GEN-AP 170/04
Advisory Pamphlet ANSSO-GEN-AP 170/05
Advisory Pamphlet ANSSO-GEN-AP 170/06

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