SIERRA LEONE CIVIL AVIATION AUTHORITY

ADVISORY CIRCULAR

SLCAA-AC-ANS035-Rev. 00

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Guidance on Safety Reviews of ATS Units

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Director General

Sierra Leone Civil Aviation Authority

1.   **GENERAL**

The Sierra Leone Civil Aviation Authority's Advisory Circulars contain information about standards, practices and procedures that the Authority has found to be an Acceptable Means of Compliance (AMC) with the associated Regulations.

An AMC is not intended to be the only means of compliance with a Regulation, and consideration will be given to other methods of compliance that may be presented to the Authority

Information considered directive in nature is described in this AC in terms such as "shall" and "must", indicating the actions are mandatory. Guidance information is described in terms such as "should" and "may" indicating the actions are desirable or permissive, but not mandatory

1.1   Purpose

This Advisory Circular provides guidelines to ensure that ATS provider shall establish a safety management system appropriate to the size and complexity of the operation, for the proactive management of safety, that integrates the management of operations and technical systems with financial and human resource management, and that reflects quality assurance principles. It ensures that the safety management system shall include policy and objectives for continuous improvement to the organization's overall safety performance.

1.2   Applicability

This AC is applicable to Air Navigation Service Providers (ANSPs) providing Air Traffic Services in Sierra Leone.

1.3   Description of Changes

This AC is the first to be issued on this subject

1.4   References

(a) PANS ATM (ICAO DOC 4444)
(b) ATS Planning Manual (ICAO DOC 9426)

1.5   Cancelled Documents

Not Applicable

1.6   Abbreviations

The following abbreviations used in this document:

AC - Advisory Circular

ANS - Air Navigation Service

ANSP - Air Navigation Service Provider

ATC – Air Traffic Control

ATCO - Air Traffic Controller

ATS – Air Traffic Service

ATM – Air Traffic Management

CNS – Communication Navigation Surveillance

ICAO - International Civil Aviation Organization

SLCAA – Sierra Leone Civil Aviation Authority

PANS - Procedures for Air Navigation Services

SARPS - Standard and Recommended Practices

2   GUIDANCE AND PROCEDURES

2.1   General Guidance

Safety reviews of ATS units shall be conducted on a regular and systematic basis by personnel qualified through training, experience and expertise and having a full understanding of relevant Standards and Recommended Practices (SARPs), Procedures for Air Navigation Services (PANS), safe operating practices and Human Factors principles.

2.1.1   The scope of ATS units' safety reviews should include at least the following issues:

(a) **Regulatory issues** to ensure that:
    (i) ATS operations manuals, ATC unit instructions and air traffic control (ATC) coordination procedures are complete, concise, and up-to-date;
    (ii) the ATS route structure, where applicable, provides for:
        (1) adequate route spacing; and
        (2) crossing points for ATS routes located so as to reduce the need for controller intervention and for inter-and intra-unit coordination;
    (iii) the separation minima used in the airspace or at the aerodrome are appropriate and all the provisions applicable to those minima are being complied with;
    (iv) where applicable, provision is made for adequate observation of the manoeuvring area, and procedures and measures aimed at minimizing the potential for inadvertent runway incursions are in place. This observation may be performed visually or by means of an ATS surveillance system;
    (v) Appropriate procedures for low visibility aerodrome operations are in place;
    (vi) Traffic volumes and associated controller workloads do not exceed defined, safe levels and that procedures are in place for regulating traffic volumes whenever necessary;
    (vii) Procedures to be applied in the event of failures or degradation of ATS systems, including communications, navigation and surveillance systems, are practicable and will provide for an acceptable level of safety; and
    (viii) Procedures for the reporting of incidents and other safety-related occurrences are implemented, that the reporting of incidents is encouraged and that such reports are reviewed to identify the need for any remedial action.

(b) **Operational and technical issues** to ensure that:

(i) The environmental working conditions meet established levels for temperature, humidity, ventilation, noise and ambient lighting, and do not adversely affect controller performance;

(ii) Automation systems generate and display flight plan, control and coordination data in a timely, accurate and easily recognizable manner and in accordance with Human Factors principles;

Note.— The ANSP should take into account relevant human factors aspects when designing or certifying equipment and operating procedures and when training and licensing personnel.

(iii) Equipment, including input/output devices for automation systems, are designed and positioned in the working position in accordance with ergonomic principles;

(iv) Communications, navigation, surveillance (CNS) and other safety significant systems and equipment:

(1) are tested for normal operations on a routine basis;

(2) meet the required level of reliability and availability as defined by the ANSP and accepted by SLCAA;

(3) provide for the timely and appropriate detection and warning of system failures and degradation;

(4) Include documentation on the consequences of system, sub-system and equipment failures and degradation;

(5) Include measures to control the probability of failures and degradation; and

(6) Include adequate back-up facilities and/or procedures in the event of a system failure or degradation;

(v) Detailed records of systems and equipment serviceability are kept and periodically reviewed.

Note. — In the context above, the terms reliability and availability have the following meanings:

(a) Reliability. The probability that a device or system will function without failure over a specified time period or amount of usage; and

(b) Availability. The ratio of the percentage of the time that a system is operating correctly to the total time in that period.

(c) **Licensing and training issues** to ensure that:

(i) Controllers are adequately trained and properly licensed with valid ratings;

(ii) Controller competency is maintained by adequate and appropriate refresher training, including the handling of aircraft emergencies and operations under conditions with failed and degraded facilities and systems;

(iii) Controllers, where the ATC unit/control sector is staffed by teams, are provided relevant and adequate training in order to ensure efficient teamwork;

(iv) The implementation of new or amended procedures, and new or updated communications, surveillance and other safety significant systems and equipment is preceded by appropriate training and instruction;

(v) Controller competency in the English language is satisfactory in relation to providing ATS to international air traffic; and

(vi) Standard phraseology is used.