APPROVAL PAGE

This Air Navigation Regulation Directorate Inspectors' Handbook has been prepared by Air Navigation Regulation Directorate to assist the effort of the Ethiopian Civil Aviation Authority to maintain the provision of effective Air Navigation Services with in Ethiopia airspace.

It is important to note that Air Navigation Regulation Inspectors' Handbook improves the safety of Air Navigation Services in Ethiopia.

The Director General of Ethiopian Civil Aviation Authority has here by approved the Air Navigation Regulation Directorate Inspectors' Handbook on June, 2016 to be used as guidance to Air Navigation Regulation Directorate & Air Navigation Services Provider.

Approved by .....

Wosenyeleh Hunegnaw (Col.)
Director General

Date June, 2016

Record of Amendments		
No	Date	Description
1	June 2016	New QMS numbering
2	September, 2017	New APPENDIX-5, 9 &10 is inserted and Appendix **8 text added.**
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1. Foreword

Ethiopia as a Contracting State to the Convention on International Civil Aviation has an obligation to ensure that the Air Navigation Services in Ethiopia are provided as per the Standards and Recommended Practices (SARPs) contained in the relevant Annexes to the Convention on International Civil Aviation and the requirements contained in the associated ICAO Documents. The Civil Aviation Authority of Ethiopia is responsible for making rules, developing institutional arrangements and conducting safety oversight functions over the Service providers that it has certified, to fulfill the aforementioned requirement.

1. This Handbook is published in connection with the Safety Regulatory Oversight activities undertaken by the Air Navigation Regulation Directorate of Ethiopia. It contains safety regulatory auditing/inspecting principles, procedures, checklists, forms and guidance materials for Air Navigation Regulation Directorate (ANRD) to conduct regulatory audits and inspections on Air Navigation Services provider (ANSP).

2. The primary objective of this publication is to assist Air Navigation Regulation Directorate auditors/inspectors and the auditee/inspected party by specifying the auditing/inspection principles and standard procedures to be followed.
3. These principles and procedures have been developed based upon proven management concepts applied in safety-related disciplines of the civil aviation industry. Application of standard procedures will ensure that audits/inspections are completed consistently according to a process which is systematic, objective, fair and transparent.

4. To enhance readability, the term "the Director" used in this document refers to "The Air Navigation Regulation Directorate (ANRD)";

   "Air Navigation Services (ANS)" means Services provided to air traffic during all phases of operations including

   - Air Traffic Services (ATS)
   - Aeronautical Information Services (AIS)
   - Aeronautical Communication Operations(COM)
   - Search and Rescue (SAR)
   - Communications, Navigation and Surveillance (CNS)
   - Procedure Design (PANS OPS) and Cartography
   - Aeronautical Meteorology Service (MET) and
   - Safety management system (SMS)

5. This manual is a controlled document and is subject to periodic review. The Air Navigation Regulation Directorate will maintain this document as accurate, complete and up-dated as possible. To achieve this, any comments or suggestions to improve the document are encouraged. Such comments or suggestions should be addressed to Director of Air Navigation Regulation Directorate (ANRD), using the Document Change Request Form, as appended to this Handbook, at the following address:

6. Revision to this handbook is the responsibility of the Air Navigation Directorate.

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1.1 Definition and terminology

Adequate *Fulfilling* minimal requirements; satisfactory; acceptable; sufficient;

ANS Inspectors' Handbook: A manual outlining general audit policies and procedures and serving as the principal guidance document for the conduct of inspection/audits within CAA;

Assessment An appraisal of procedures or operations based largely on experience and professional judgment.

Audit: An in-depth review of the activities of an organization to verify conformance to regulatory requirements;

Audit activities: Those activities and procedures through which information is obtained to verify conformance to regulatory requirements;

Auditee: The organization to be audited. This term may be interchanged with "company", "document holder", "operator" and "organization";

Audit finding: A non-conformance to a specified regulatory requirement or company approved procedure, identified during an audit and documented on a finding form;

Audit follow-up an audit of ANS provider to determine progress in implementing recommendations on the corrective action plan which resulted from an ANR safety oversight audit/inspection and to include supplementary findings and recommendations if made incidental to the audit follow-up

Audit preparation briefing for team members A pre-audit briefing provided to team members by the audit team leader, the purpose of which is to provide last minute information and instructions, as appropriate, directly related to the specific audit/inspection to be conducted.

Audit report: A report that outlines the audit process and provides a summary of the audit findings;

Audit/Inspectorate team leader *the Air Navigation Regulation Inspectorate* staff member designated by the Director General of Ethiopia Civil Aviation Authority to be responsible for the conduct of a specific audit, or a series of inspections, including the consolidation and completion of the audit /inspection report

Audit Scope The operational disciplines and/or operational areas that are assessed during the conduct of an Audit/Inspection.

Certification: The process of determining competence, qualification, or quality on which the issuance of a [State] aviation document is based. This includes the original issuance, denial, renewal or revision of that document;

Competence: Demonstrated personal attributes and demonstrated ability to apply knowledge and skill;

Compliance: The fulfillment of regulatory requirement;

Confirmation request form (CRF): A form issued to an organization by an inspector requesting specific information. The organization is requested to respond within a specified period;

Conformance: The state of meeting regulatory requirements or organization's approved procedures;

Comprehensive systems approach *the* implementation of structured process and methodology for the planning, preparation, conduct, reporting, follow-up and evaluation of ANR safety oversight audits.

Compliance Checklist (CC) *A* tool which will provide ANR with information on a ANS's level of implementation of International Standards and Recommended Practices

Closing meeting A meeting of the ANR audit team and the representatives of the audited ANS at the end of the audit, the purpose of which is to provide the

ANS authority with preliminary information on audit findings and proposed recommendations to enable the service provider to start working on its corrective action plan.

Corrective action plan: A plan submitted in response to findings. The plan outlines how the company proposes to correct the deficiencies documented in the findings;

Documented: That which has been recorded in writing, photocopied or photographed and then signed, dated and retained;

Finding: A non-conformance to a regulatory requirement or company approved procedure;

Finding form: A form used to document a finding;

Follow-up: The final audit phase that focuses on corrective action to findings issued during an audit;

Inspection: The basic activity of an audit, involving the systematic assessment of a specific characteristic of an organization to verify conformance to regulatory requirements or company approved procedures. The term also refers to inspector tasks exercised in the performance of this activity;

Inspection field: The area or unit within the ANSP to be inspected / audited;

Non-conformance: The failure to meet regulatory requirements or company approved procedures;

Practice: The method by which a procedure is carried out;

Procedure or process: A series of steps followed methodically to complete an activity. This includes: the activity to be done and individual(s) involved; the time, place and manner of completion; the materials, equipment, and

documentation to be used; and the manner in which the activity is to be controlled;

Quality assurance activities (QAA): A series of planned activities to determine whether the management system conforms to the requirements of the operating standards. These activities include quality assurance reviews and self-assessments;

Standard: An established criterion used as a basis for measuring an organization's level of conformance;

Team leader: The individual appointed under the authority of the [Director of Safety oversight] to lead an audit team.

Team member: The individual appointed under the authority of the [Director of Safety oversight] to participate in safety audit;

Working papers: All documents required by the auditor or audit team to plan and implement the audit. These may include inspection schedules, assignments, checklists and various report forms.

1.2 Abbreviation /Acronyms

Abbreviation	Decode
AIS	Aeronautical Information Services
ANRD	Air Navigation Regulation Directorate
ANSP	Air Navigation Service Provider
ATM	Air Traffic Management
ATMS	Air Traffic Management Services
ATS	Air Traffic Services
CAP	Corrective Action Plan
CNS	communications, navigation and surveillance
CAA	Civil Aviation Authority
COM	Aeronautical Communication Operation
ICAO	International Civil Aviation Organization
OBN	Observation
RCA	Request for Corrective Action
SAN	Safety Notification
SAR	Search and Rescue Services
SARPs	Standards and Recommended Practices
SMS	Safety Management System
DGCA	Director General of Civil Aviation
CE	Critical elements of a safety oversight system
AIP	Aeronautical Information publication
GM	Guidance material
STD	Standard

1.3 Objectives of the Manual

- To provide guidance to ANR Inspectors administering the Inspection and Audit programme.
- To promote standardization in application of programme procedures and practices.
- To fulfill the ANS certification requirements in accordance with the Civil Aviation Regulations.
- To encourage and promote the establishment of reasonable programmes for enhancing and improving safety to benefit the aviation community

1.4 Applicability

The guidance material contained in this Handbook is designed specifically for the safety over sight audit in order to promote a high level of standardization and consistency during the conduct of Audits under the safety over sight audit/inspection activities.

1.5 The eight critical elements

While defining the safety oversight system in a State, ICAO has identified eight critical elements, which are essential part of a safety oversight system and must be considered for the effective implementation of a safety related policy and associated procedures. (See appendix 4)

2. Scope of Safety Regulatory Audit and Regulatory Inspection

2.1 Introduction

2.1.1 Air Navigation Regulation Directorate shall oversee the compliance of safety regulatory requirements and standards by the ANS providers through regular audits/inspections.

2.1.2 Audit and Inspection are techniques employed by Air Navigation Regulation Directorate to verify compliance with applicable safety regulatory requirements and standards by the ANS providers. Both of them are tools for evaluating the performance of the ANS providers with a view to ensuring ANS system safety.

2.1.3 In addition to routine audits/inspections, such activities may also be conducted consequent upon significant changes in the ANS provider's system or as a follow-up on corrective actions which have been imposed in previous audit/inspection.

2.2 Objectives of Regulatory Audits and Regulatory Inspections

1.2.1 The objectives of safety regulatory audits/inspections are as follows:

a) To verify compliance with:-

(i) Established procedures against required ANS safety provisions including the relevant ECAA PROC. 616/2008 rules and regulations, ICAO SARPs, safety regulatory requirements and standards, and ANSP's SMS procedure;

(ii) Actual operational practices against stipulated procedures;

b) To determine the effectiveness of the procedures in place in meeting specified objectives;

c) To identify areas for improvement in terms of ANS system safety and integrity.

d) To fit the eight critical elements to the actual audits /inspections practices.

2.3 Differences between Regulatory Audits and Inspections

2.3.1 Major differences between a safety regulatory audit and an inspection are illustrated as follows:

Regulatory Audits	Regulatory Inspections
• Apply to the overall arrangements, or elements thereof, of the ANS processes or services.	• Apply to particular ANS service or specific parts of the ANS system.
Verify compliance with: • Documented provisions and other established arrangements against safety regulatory requirements / standards, ICAO SARPs, ECAA PROC. 616/2008 rules /regulations; • Actual operational practices against documented procedures and other established arrangements.	• Verify by testing and/or examination whether prescriptive safety regulatory requirements / standards have effectively been complied with.
• Focus special attention on processes with wider scope.	• Focus normally on a particular element of ANS system with smaller scope.
• Represent prime safety oversight techniques.	• May serve as an oversight technique supplementary to audits.
• Usually conducted by a team of auditors in accordance with more comprehensive procedures.	• May be conducted by one inspector in accordance with simpler procedures.

2.4 Audits / Inspections Conducted by ANS Regulator

2.4.1 Air Navigation Regulation Directorate carries out various safety survey activities including audits/inspections on a regular basis as part of its regulatory function and as a means of proactive safety management.

2.4.2 Air Navigation Regulation Directorate periodically conducts safety audits/inspections on ANS system and services of the ANS providers, which may be referred to as "Internal" audits/inspections.

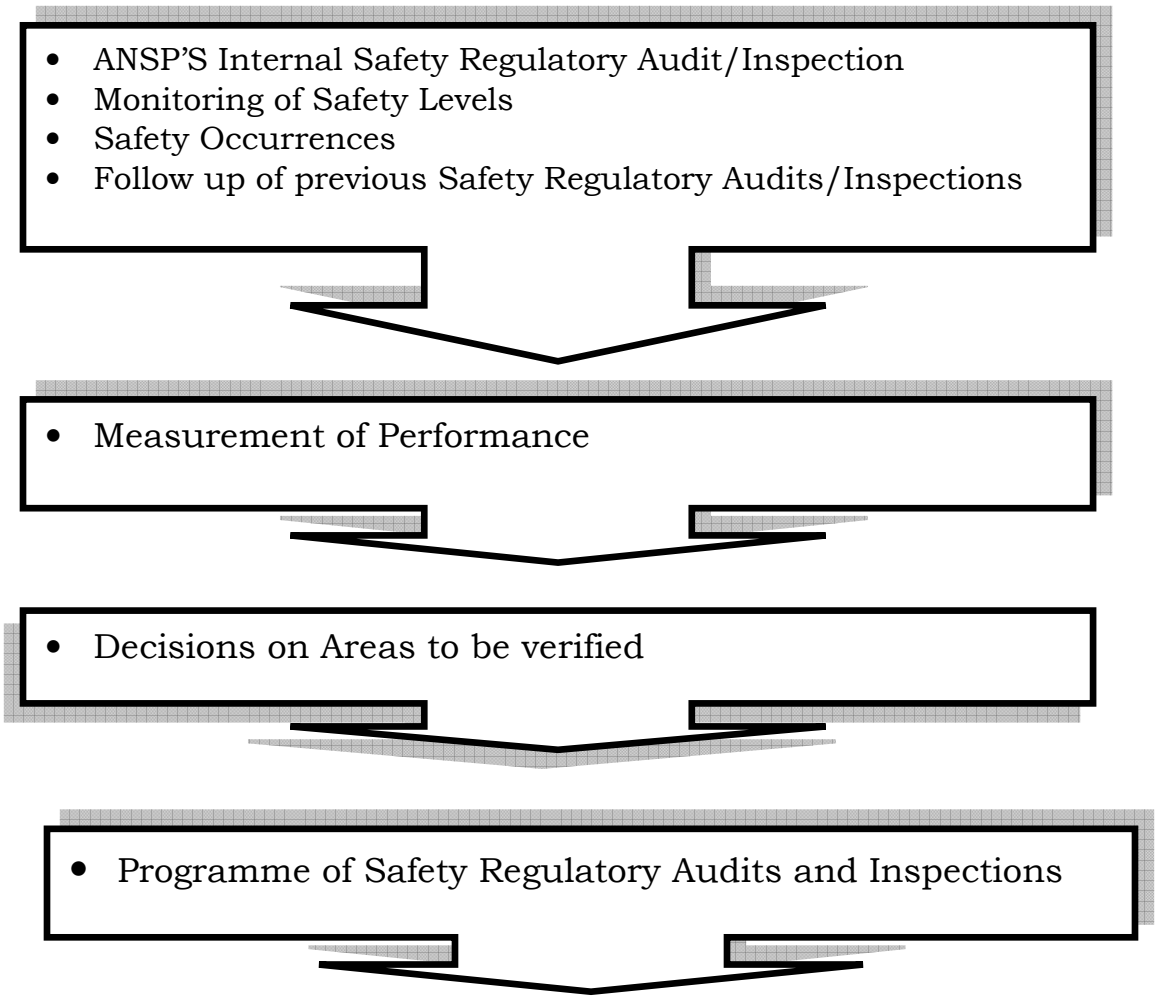
2.4.3 In respect of "Internal" audits/inspections, the associated findings and recommendations, if any, shall be documented in reports and made known to the Auditee in accordance with applicable audit/inspection protocols and procedures.

3. ANRD Audit and Inspection Programme

3.1 Annual Plan

3.1.1 Air Navigation Regulation Directorate programmes annual safety regulatory audit/inspection plan to cover all possible areas of safety concern, including arrangements to carry out safety audits, reviews or surveys on the ANS providers.

3.1.2 Air Navigation Regulation Directorate takes necessary steps, to programme safety regulatory audits/inspections as shown in the following diagram. It illustrates the logical flow in programming such activities:



3.1.3 The Air Navigation Regulation Directorate shall prepare an annual audit/inspection plan, by the end of each year, which may be updated when required. This annual plan shall be submitted to Aviation Regulation and to Air Transport and Planning Directorate.

3.1.4 The directorate ensures that the annual auditing/inspection activities are appropriately prioritized and programmed in the annual plan.

4. Safety Regulatory Auditors and Inspectors

4.1 Qualification and Criteria

4.1.1 Air Navigation Regulation Directorate defines qualification criteria for regulatory auditors/inspectors so as to ensure an appropriate level of knowledge, training, experience and competency covering, at minimum, the following aspects:

a) Knowledge and understanding of the standards against which audits and inspections are to be performed;

b) Techniques of examining, observing, interviewing, evaluating and reporting;

c) Skills required for managing an audit/inspection such as planning, organizing, communicating, documenting and directing;

d) Competency of auditors/inspectors that should be evaluated on a regular basis.

4.2 Competency and Attributes

4.2.1 Air Navigation Regulation Directorate provides all regulatory auditors/inspectors, including ad-hoc auditors / inspectors, with required training to ensure knowledge, skill and competency. The director would normally arrange regulatory auditors/ inspectors to receive proper training before undertaking an audit/inspection.

4.2.2 Air Navigation Regulation Directorate requires regulatory auditors/inspectors to perform assigned duties in a professional, honest and consistent manner.

4.3 Functions & Responsibilities of Safety Regulatory Auditors/ Inspectors

4.3.1 Air Navigation Regulation Directorate auditors/inspectors are responsible for:

a) Conducting regular audits/inspections as per annual audit/inspection plan & complying with applicable audit/inspection procedures as stipulated in this document

b) Documenting observations, reporting findings & taking follow-up actions as required;

c) Clarifying findings with audited/inspected party where necessary;

f) Verifying the effectiveness of corrective actions taken as a result of the audit/inspection wherever applicable; and

g) Maintaining and safeguarding audit/inspection documentation as appropriate.

h) Preparing and utilizing relevant checklists for different ANS domains being audited/ inspected.

4.4 Functions of Inspectors

4.4.1 Carry out efficient and effective safety oversight activities on ANS facilities, Air Traffic Management system, on AIS/MAP facilities, Flight Procedure Design, Aeronautical Search and Rescue and Aeronautical Meteorological Services with objective of enhancing safe operation of aircraft and to ensure compliance with Civil Aviation Regulations and Standards.

4.4.2 Develop technical guidance materials and procedures for ANSP; and

4.4.3 Recommend changes to civil aviation legislation and Regulations as appropriate.

4.5 Responsibilities of ANR Director

4.5.1 Approves documents, training records and other relevant documents of the service provider.

4.5.1 Control the overall activities of the ANR Directorate.

4.6 Responsibilities of Lead Auditor/Inspector

4.6.1 Whether an audit/inspection is carried out by a team or an individual, Air Navigation Regulation Directorate assigns where necessary a Lead Auditor/Inspector as overall in-charge. His/her responsibilities, in addition to those of auditor/ inspector as listed in paragraph 3.3.1 above, include:

a) Assisting with the selection of other audit/inspection team members;

b) Preparation of audit/inspection plan, including the management of team resources;

c) Convening of the pre-audit and exit meetings of an audit; and

d) Submitting audit/inspection reports.

4.7 Composition of Safety Regulatory Audit/Inspection Team

4.7.1 Depending on the complexity and scale of an audit/inspection, the audit/inspection team may comprise ad-hoc auditors/inspectors which are experts with specialized background.

4.7.2 For the purpose of training, the audit/inspection team may include trainees who are acceptable to the Lead Auditor/Inspector.

4.8 Cooperating with the Audit/Inspection Team

4.8.1 All persons/parties subject to a regulatory audit/inspection are to co-operate with the auditors/inspectors and, where necessary, provide administrative and logistic support to the audit/inspection process.

4.9 Identification Credential

4.9.1 The ECAA must supply an official identification badge for all members of the auditors or inspection team, and each member is required to display the identification badge at all times when conducting the on-site assessment.

5. Planning and Preparing for Safety Regulatory Audits and Inspections

5.1 Audit/Inspection Plan

5.1.1 Air Navigation Regulation Directorate conducts audit/inspection in accordance with a plan that normally includes pertinent audit/inspection details such as date, objective, scope, documentation, meeting arrangements, work schedule, composition of audit/inspection team and its assignments, etc.

5.2 Pre-Audit/Inspection Preparation

5.2.1 Air Navigation Regulation Directorate appropriately prepares each audit/inspection by addressing the purposes and scope of the audit/inspection, agenda of the pre-audit and exit meetings of a regulatory audit, expected time and duration of the audit/inspection, and the identification of reference documents and resources needed.

5.2.2 Air Navigation Regulation Directorate reviews, as appropriate, organizational documentation including published manuals, procedures, instructions, guidance materials, pertinent records, and any previous audit/inspection reports of the audited/inspected party. The Office may require the audited/inspected party to make relevant documents/records available before the on-site audit/inspection commences.

5.2.3 Subsequently, the Lead Auditor should organize as appropriate an internal auditors meeting to share their initial findings of the pre-audit document review. At the same time, the Lead Auditor would also highlight the areas of concern, so as to assist other auditors to better prepare themselves for the on-site audit.

5.3 Prior Notification and Deferral

5.3.1 Air Navigation Regulation Directorate issues prior notification to the audited/inspected party. For audits, (ANRD) Air Navigation Regulation Directorate normally provides a notification of no less than 1 month prior to the exercise, and no less than 2 weeks for audit/inspection.

5.3.2 The Office may accept audit/inspection deferral requests presented in writing to Air Navigation Regulation Directorate, provided that there is/are compelling reason(s) for such requests.

5.4 Audit and Inspection Conduct

5.4.1 An audit is conducted on Bole international airports at least once a year to determine the level of conformity with Standards and Recommended Practices in the fields of ANS, SMS and Aeronautical Meteorology.

5.4.2 An Inspection is conducted on other international airports at least once a year to determine the level of conformity with Standards and Recommended Practices in the fields of ANS, SMS and Aeronautical Meteorology.

5.4.3 Inspection is conducted on selected Domestic airports at least once a year to determine the level of conformity with Standards and Recommended Practices in the fields of ANS.

5.5 Audit, Spot/Random Check and Follow-Up Inspections

5.5.1 To determine the level of conformity with ICAO Standards and recommended practices audit, spot/random check or follow-up inspection should be conducted at least

5.5.1.1 Audit shall be conducted on international airports at least once in a year.

5.5.1.2 Inspection shall be conducted on a regular base at all airports

5.5.1.3 spot/random inspection shall be conducted as necessary

5.5.1.4 Follow up inspection shall be conducted based on CAPs submitted

5.6 Documentation

5.6.1 Air Navigation Regulation Directorate should use the following documents to facilitate an audit/inspection:

A) Checklist for evaluation;

B) Forms for reporting audit/inspection observations or non-compliances;

C) Forms for the audited/inspected party to respond to auditor/inspector's observations or non-compliances;

D) Document for recording evidence to support conclusions reached by the auditors/inspectors. For audits, Air Navigation Regulation Directorate normally provides the Auditee with a copy of the checklists during pre-audit meeting, and takes measures to protect any working documents that involve confidential or proprietary information.

5.7 Audit Termination

An audit must have a formal process that permits an Audit to be terminated under specified conditions. Such process will include provisions for formal notification of the Operator.

5.7.1 Conditions for Termination

An Audit must be terminated when any one of the following conditions is determined to exist:

5.7.1.1 The Auditee is attempting to exert obvious and undue influence on the Audit Team;

5.7.1.2 The Auditee is raising unacceptable barriers that significantly limit or inhibit the ability of the audit team to discover factual evidence;

5.7.1.3 A conflict of interest becomes evident;

5.7.1.4 There is a significant breach of the audit agreement;

5.7.1.5The Audit Team has determined that Audit objectives are not attainable.

6. Air Navigation Service Inspection Fields

6.1. General

6.1.1. The procedures for conducting inspections/audits outlined in this handbook shall apply to all ANS areas mentioned below. Checklists and forms are provided to guide the inspectors/auditors.

6.1.2. The main objective of ANR Inspection is to determine conformance to the Civil Aviation Regulations and Standards.

6.2. Inspection fields: - The areas of ANR covered in the inspection/audit programme are: -

6.2.1. Air Traffic Services

a) Aerodrome control

b) Approach Control

c) Area Control

6.2.2. Aeronautical Information Services

a) AIS Aerodrome Unit

b) AIS International NOTAM Office (NOF)

c) AIS HQ Unit

6.2.3. Procedures Design (PANS OPS) and Cartography

a) Cartographic Unit

b) Construction & Publication

6.2.4. Communication, Navigation and surveillance

a) Communication

b) Navigation

C) Surveillance

6.2.5. Search and Rescue

a) Rescue coordination center

b) Rescue sub centre

6.2.6. Aeronautical Communication Operations

6.2.7. Aviation Aeronautical Meteorology

6.2.8 Safety management system

7. Procedures for Safety Regulatory Audits and Inspections

7.1 Pre-Audit/Inspection Meeting

7.1.1 The audit/inspection team normally conducts a Pre-Audit Meeting on the first day of the audit with the Auditee so that both parties have an opportunity to meet and discuss on relevant details and arrangements. For inspections, Air Navigation Regulation Directorate may decide on not to hold such a meeting.

7.1.2 The Pre-Audit Meeting, to be managed by the Lead Auditor, shall cover the following:

- Introduction of the audit team members
- Review on audit programme including objectives and scope
- Brief introduction to auditing methods, criteria and procedures to be used
- Time, date and location for the post-audit meeting
- Clarification of any unclear detail, if any, in respect of the audit

7.2 On-site Audits/Inspections

7.2.1 Air Navigation Regulation Directorate may conduct these activities in operational locations such as Control Tower/Centre, briefing office, CNS

Equipment rooms, facilities such as training simulators and lecture rooms. The audited/inspected party shall make necessary arrangements to facilitate such activities. Auditors/Inspectors shall, insofar as practicable, avoid causing interference to duty staff, in particular when working in operational control areas.

7.2.2 During any on-site audit/inspection, Air Navigation Regulation Directorate may require the presence of an accompanying officer appointed by the audited/inspected party to witness the process and to assist the auditors/inspectors whenever required.

7.3 Collection of Data/Information

7.3.1 Air Navigation Regulation Directorate auditor/inspector primarily collects evidence through interviews, examination of documents, observation of activities and conditions in the areas of concern, and focuses on practices against published procedures and specific regulatory requirements/standards.

7.3.2 Air Navigation Regulation Directorate auditor/inspector conducts other activities to complement the Audit/inspection wherever needed. The auditor/inspector takes note of and investigates into any clues suggesting non-compliances which may not necessarily be covered in the checklist. The auditor/inspector also verifies information gathered through interviews as required.

7.3.3 When evidence of non-compliance is found, it shall be drawn to the attention of the audited/inspected party immediately. The accompanying officer, if provided, shall acknowledge such finding. Alternatively, the accompanying person may provide evidence to prove otherwise. Subject

to the auditor's assessment of the new evidence, he/she may withdraw such finding of non-compliance.

7.4 Post-Audit/Inspection Meeting (Debrief)

7.4.1 On completion of an audit, the auditors convene a post-audit meeting with the officer in-charge of the Auditee. The auditors have the discretion to either hold such meeting on the same day of the audit or choose another date for this occasion. The purpose of this meeting is to provide both the audit team and the Auditee an opportunity to cover the following aspects:

- Review of the objective and scope of the audit;
- Summary of the audit activities;
- Presentation of draft findings and recommendations; and
- Post-audit actions by both the audit team and the Auditee.

7.4.2 The auditors emphasize clearly safety-significant issues, if any, and ensure that all findings are understood and acknowledged by the Auditee.

7.4.3 The auditors provide documented findings and recommendations to the Auditee.

7.4.4 For inspections, the inspector may choose not to convene such meeting owing to the smaller scale and scope of these activities as compared to those of audits.

7.5. Corrective Action Plan (CAP)

7.5.1 Basing on the audit/inspection findings and recommendations, the Auditee shall establish a corrective action plan (CAP) which defines immediate short-term remedial actions, if applicable, and/or long-term corrective actions planned.

7.5.2 **Corrective Action plan**, except for Safety Notifications that require immediate action by the **auditee**, should normally be forwarded to Air Navigation Regulation Directorate within **30 working days** upon receipt of the audit/inspection report. Further, the auditee party should nominate reasonable action due date(s) by which corrective action(s) is/are to be completed. Reason(s) should be given when the above action due date cannot be projected.

7.5.2.1 The **audit report** is normally presented to the auditee within **10 working days** calculated from the last day of the physical audit. Audit reports that require additional time for **ANR director** review may be given **5** additional days to complete. Any delay beyond the above maximums must be documented since the validity of the audit will be compromised if the report is not presented in a timely manner.

7.5.3 If the condition in paragraph 7.5.2 is not meet the **first reminder** will be sent by the **Air Navigation Regulation** Director to the concerned directorate.

7.5.4 If the condition in paragraph 7.5.3 is not meet the **second reminder** will be sent by the Air Navigation **Regulation** Director addressing to Aviation Regulation Deputy Director and to the Director General of ECAA for appropriate action.

7.6 Verbal Comments

The audit or inspectors team may use the closing meeting as an opportunity to deliver informal verbal comments to the Auditee for the purpose of explaining; clarifying or expanding upon certain operational issues associated with or rise during the audit. Verbal comments are the

appropriate means for imparting information relevant to minor discrepancies that did not warrant a finding or observation, or for providing suggestions that might lead to the improvement or enhancement of the Audi tee's operations. The use of informal verbal comments during the closing meeting is the only acceptable method for the audit team to address discrepancies or weaknesses noted in areas of the operation that fall outside the scope of ICAO SARPs (i.e. not covered by or associated with a specific standard or recommended practice).

Verbal comments delivered by the audit team at the closing meeting are informal only, and therefore, are not to be documented. If presented, it should be emphasized to the operator that verbal comments are not binding.

8. Final Report, Follow-Up and Review

8.1 Report Preparation and Submission

8.1.1 After concluding an audit/inspection, the auditor/inspector prepares a final report, which shall be forwarded to the Head of the auditee party within two weeks (under cover memo issue). The report should also be appended with audit/inspection standard forms to indicate observations and/or non-compliances, if any, and the auditee party should acknowledge receipt of the report as soon as practicable and CAP forwarded according to 7.5.2 above.

8.1.2 For inspection reports, the inspector should normally use standard Forms as appropriate.

8.1.3 As regards the audit reports, they should normally be presented in narrative form, reflecting faithfully on the content of the audit. Such reports should normally contain the following items as applicable:

a) Scope, objectives and criteria of the audit;

b) Details of the audit preparation and the identification of people involved;

c) Identification of reference documents reviewed during the audit;

d) Details of non-compliances noted during the audit and the associated corrective action plan, if any, of the Auditee;

e) Records, if any, of the pre-audit and post-audit meeting.

8.2 Follow-Up

8.2.1 When a final report is received, the auditee party shall determine the appropriate CAP to improve upon the system weaknesses or to correct any non- compliances that are identified in the audit/inspection.

8.2.2 It is incumbent upon the auditee party to complete all corrective actions by the action due date nominated. The auditee party shall also document all corrective actions taken, which are subject to post-audit/inspection review as mentioned below.

8.3 Post-Audit/Inspection Review

8.3.1 Air Navigation Regulation Directorate and the auditee party shall jointly conduct post-audit/inspection reviews with the following objectives:

a) To monitor the progress on the implementation of a CAP, and

b) To verify the effectiveness of the corrective actions.

8.3.2 For audits, a review on follow-up actions shall be conducted normally 12 months after an audit. For inspections, an annual review on follow-up actions subsequent to all inspections conducted during a calendar year shall be held at a mutually agreeable date. Such reviews shall be reported to the senior management of the respective Divisions and properly documented.

9. INSPECTOR TRAINING, QUALIFICATIONS AND CREDENTIALS

9.1 Introduction

The training objective is to provide the ANS Inspectors with basic knowledge which will enable them to perform the ANS regulatory functions. The knowledge is acquired through a combination of formal training courses and on-the-job training.

9.2 Types of training

9.2.1 Initial training

The minimum training that must be completed prior to issuance of an ANS Inspector's credentials includes:

a) Inspection/audit Course,

b) Enforcement and Compliance Procedures Course,

c) OJT including administrative procedures and a minimum of two (2) inspections with a qualified ANS Inspector.

d) Communications Skills,

e) Report Writing Skills,

f) Safety Oversight for Managers,

9.2.2 Specialized training

The specialized training shall be dependent on the different ANS fields of inspection i.e.

- Air Traffic Services (ATS)
- Aeronautical Information Services (AIS)
- Search and Rescue (SAR)
- Aeronautical Communication Operations(COM)
- Communications, Navigation and Surveillance (CNS)
- Safety management system (SMS)

- Procedure Design and Cartography (PANS OPS)and
- Meteorological services for air navigation (MET).

9.2.3 Recurrent training

All ANS Inspectors shall be required to undertake recurrent training at least once every two years.

9.2.4 Training for re-qualification

An Inspector who has been out of the programme for more than two year shall conduct at least three inspections under supervision.

9.2.5 on-job-training (OJT)

All ANS Inspector trainees shall undergo OJT under the supervision of a qualified ANS Inspector. The trainee must:-

a) Participate in at least three inspections conducted by a qualified ANS Inspector as an observer; and

b) Conduct at least three inspections under supervision.

9.2.6 Additional Training

a) Aviation Management Course,

9.3 Training plan

The Air Navigation Regulation Directorate shall ensure that in every Calendar year Inspectors are trained in the relevant special courses.

9.4 Training records

- The Air Navigation Regulation Directorate shall keep the training records of all Inspectors.

- Each Inspector also keeps the training records of ATS, AIS, CNS, SAR, COM OPS, PANS OPS and cartography of Air Navigation Services as well as Aeronautical MET personal.

10. Enforcement policy

Follow proper procedures to take enforcement actions in accordance with available regulations in case of safety violations made by the air navigation services provider.

Appendix -1
Corrective Action Plan Form

Company Name:	**Base Location:**	**Date (dd/mm/yyyy)**	**Ref. No.:**
Area of Inspection(Checklist):		**Finding Number:**	
ANS Corrective Action **a) Short-Term** **Completion Date (dd/mm/yyyy)**			
b) Long-Term Corrective Action to prevent Recurrence			
Proposed Completion Date (dd/mm/yyyy)	**Company Representative (Name and Signature)**	**Date (dd/mm/yyyy)**	
For ECAA use only **ECAA Response/Comment** ☐ **Accepted** ☐ **Rejected** **New CAP Target Date** _____ **(dd/mm/yyyy)**			
Inspector(s) Signature	**Date (dd/mm/yyyy)**		
Reason for closure/Follow-up/Comments **CAP Tracking form in use** ☐ **Yes** ☐ **No** **On-site Follow-up Required** ☐ **Proposed Date** _____ **(dd/mm/yyyy)**			
☐ **Administratively Closed** ☐ **Long-Term Corrective Action Exceeding 90 days**			
Date of Closure (dd/mm/yyyy)	**Finding Closed by:**		

Appendix - 2

E C A A AIR NAVIGATION REGULATION DIRECTORATE

Random (spot check) inspection for ANSR Inspectors'

1. AREA (SITE) OF INSPECTION

2. HAAB ☐ HABD ☐ HADR ☐ HAMK ☐

3. Date and Time of Inspection conducted ☐

4. Document reference if any, ☐

5. Finding Observed

_____

_____

_____

6. Recommendation

_____

_____

_____

_____

7. Name of inspector and signature _____

Appendix – 3

Sample checklist

Requirement:- **Reference** :-			
No	Checklist Questions	Compliance verified	Evidence and/or Observations
1		Yes ☐ *No* ☐	
DESCRIPTION/COMMENTS			

APPENDIX-4

CRITICAL ELEMENTS OF A SAFETY OVERSIGHT SYSTEM

ICAO Contracting States, in their effort to establish and implement an effective safety oversight system, need to consider the critical elements for safety oversight (CE). Critical elements are essentially the safety defense tools of a safety oversight system and are required for the effective implementation of safety-related policy and associated procedures. The effective implementation of the CE is an indication of a State's capability for safety oversight.

ICAO has identified and defined the following critical elements of a State's safety oversight system:-

CE-1. Primary aviation legislation. The provision of a comprehensive and effective aviation law consistent with the environment and complexity of the State's aviation activity and compliant with the requirements contained in the Convention on International Civil Aviation

CE-2. Specific operating regulations. The provision of adequate regulations to address, at a minimum, national requirements emanating from the primary aviation legislation and providing for standardized operational procedures, equipment and infrastructures (including safety management and training system), in conformance with the Standards and Recommended Practices (SARPs) contained in the Annexes to the convention on International Civil Aviation.

Note- the term "regulations" is used in a generic sense to include but is not limited to instructions, edicts, directives, sets of laws, requirements, policies, and orders

CE-3. State civil aviation system and safety oversight functions. The establishment of a Civil Aviation Authority (CAA) and/or other relevant authorities or government agencies, headed by a Chief Executive Officer, supported by the appropriate and adequate technical and non-technical staff and provided with adequate financial resources. The State authority must have stated safety regulatory functions, objectives and safety policies.

Note:- The term "State civil aviation system" is used in a generic sense to include all authorities with aviation safety oversight responsibility which may be established by the State as separate entities, such as: CAA, Airport Authorities, Air Traffic Service Authorities, Accident Investigation Authority and Meteorological Authority.

CE-4. Technical personnel qualification and training. The establishment of minimum knowledge and experience requirements for the technical personnel performing safety oversight functions and the provision of appropriate training to maintain and enhance their competence at the desired level. The training should include initial and recurrent (periodic) training.

CE-5. Technical guidance, tools and the provision of safety-critical information. The provision of technical guidance (including processes and procedures), tools (including facilities and equipment) and safety-critical information, as applicable, to the technical personnel to enable them to perform their safety oversight functions in accordance with established requirements and in a standardized

manner. In addition, this includes the provision of technical guidance by the oversight authority to the aviation industry on the implementation of applicable regulations and instructions.

CE-6. Licensing, certification, authorization and approval obligations. The implementation of processes and procedures to ensure that personnel and organizations performing an aviation activity meet the established requirements before they are allowed to exercise the privileges of a license, certificate, authorization and/or approval to conduct the relevant aviation activity.

CE-7. Surveillance obligations. The implementation of processes, such as inspections and audits, to proactively ensure that aviation license, certificate, authorization and/or approval holders continue to meet the established requirements and function at the level of competency and safety required by the state to undertake an aviation-related activity for which they have been licensed, certified, authorized and/or approved to perform. This includes the surveillance of designated personnel who perform safety oversight functions on behalf of the CAA.

CE-8. Resolution of safety concerns. The implementation of processes and procedures to resolve identified deficiencies impacting aviation safety, which may have been residing in the aviation system and have been detected by the regulatory authority or other appropriate bodies

Note. - *This would include the ability to analyze safety deficiencies, Forward recommendations, support the resolution of identified deficiencies, as well as take enforcement action when appropriate.*

APPENDIX -5

Procedure for Elimination of Deficiencies

1. Introduction

1.1 According to the approved annual plan of the Air Navigation Regulation Directorate various safety survey activities will be conducted including audits/inspections on a regular basis as part of its regulatory function.

1.2 This procedure is developed to provide information on management tool to assist in applying the methodology for the efficient identification, assessment and clear reporting of ANSP deficiencies.

1.3 The procedure contains a mechanism as to how to eliminate deficiencies identified by air navigation regulation inspectors. Whenever the finding submitted to the ANSP by inspectors the ANSP have to present their corrective action plan accordingly.

1.4 This procedure assists the air navigation regulation inspectors to carry out follow up inspection and to eliminate the deficiencies identified.

2. Scopes

This Procedure covers the review and elimination of deficiencies identified within the framework of ATS, SAR, AIS, CNS, ASM, PANS OPS, Cartography and MET

3. Objective

The objective of this procedure is:-

a) To set time frame for elimination of deficiencies.
b) All corrective measures or actions proposed should contain realistic estimated implementation date. They may be broken down into immediate, short and long-term actions.
c) The main objective of this mechanism is to provide a systematic approach to the management of deficiencies.
d) This mechanism is to provide clear definition of the responsibility and obligations of the ANSP in the management of the deficiencies.

4. Background

4.1 The ECAA in recognition of its responsibility under Article 28 of the Chicago convention for the provision of safe air navigation services undertakes to accord highest priority to the rectification and elimination of all identified air navigation deficiencies.

4.2 Elimination of deficiency is a requirement by ECAA based on the ICAO standards.

5. Based on the annual plan Audit / Inspection the following activities shall be carried out accordingly:-

- Audit shall be conducted on international airports at least once in a year.
- Inspection shall be conducted on a regular base at all airports.
- spot/random inspection shall be conducted as necessary
- Follow up inspection shall be conducted based on CAPs submitted.

6. Submission and acceptance of corrective action plans

Based on the audit/ inspection findings report the Air Navigation Services Provider shall develop corrective action plan (CAP) and submit to Air Navigation Regulation Directorate within **30 working days.**

If the auditee fails to respond to submit the CAPs, the **first reminder** will be forwarded to Director the Air Navigation Services.

If the ANS does not respond within **7 working days**, a **second reminder** will be originated. Subsequently, the issue will be addressed to the Director General for appropriate action as per the regulation.

7. Follow up inspection

If the deficiencies are resolved the finding will be closed if not such deficiencies shall be reported to the senior management of the respective Divisions and reported to the higher management for appropriate action as per the regulation.

APPENDIX-6

Air Navigation Regulation Directorate

Major Functions

Air Navigation Regulation Directorate is organized under Deputy Director of Aviation Regulation to accomplish the following major duties.

1. Determine the degree of conformance achieved by the air navigation services provider to the International Civil Aviation Organization (ICAO) standards in relation to the Ethiopian proclamation.
2. Assets the efficiency of the air navigation services in applying the ICAO standards and recommended practices and procedures to provide safe, efficient and economical service to aircraft which are operating in the Ethiopian airspace and to check the training, rating and recruitment of controllers.
3. Prepare directives and guidance materials based on the ICAO regulations and conventions which help to follow the work of the air navigation services provider.
4. Prepare safety audit schedule and form audit team, prepare audit procedures, audit time table, notify to the air navigation services providers.
5. Conduct periodically audit and follow-up inspection to identify findings in the documentation, operational and procedures for the improvement of safety in air navigation.
6. Conduct periodic inspection, surveillance activities and carry out continuous follow-up inspection to eliminate deficiencies fond by the inspectors.

APPENDIX-7
MAJOR DUTY AND RESPONSIBILITY
OF AIR NAVIGATION REGULATION INSPECTORS

- Conduct periodically audit and audit follow-up to identify weakness in the Documentation; Operational processes and procedures for the purpose of improve the air transport provision.
- Conduct periodically audit and audit follow-up to identify performance of human recourse in relationship with equipment and procedures for the purpose of improve efficiency and safe operation of aircrafts.
- Conduct periodic audit / inspection, surveillance activities and carry out continuous follow-up to elimination of deficiencies as per the plan.
- Set requirements for the development of the necessary manuals, plans of operation, maintenance of personnel training records and implementation of training programs for ANS employees.
- Prepare and update guidance materials, Inspection checklist, Procedure handbook and other documents.
- Ensure the implementation of systematic management of the risks with in Air Navigation services provider by conducting audit and audit follow up and by giving qualified recommendation on the findings to achieve high levels of safety.
- Ensure that operational personnel competent to perform their duty in accordance with recruitment policy, minimum required training, refresher training and rating.

- Ensure ANS have implemented effective coordination with concerned units for safe and economical operation of air transport.
- Communicating and clarifying observations and findings with audited/inspected party where necessary
- Maintaining audit/inspection documents, training records and other relevant documents.
- Determine the degree of conformance achieved by the Air Navigation Services provider in relation to the International Civil Aviation Organization (ICAO) standards.
- Review the efficiency of the Air Navigation Services in applying the ICAO standards and recommended practices and procedures to provide safe, efficient and economical service to aircraft which are operating in Ethiopian airspace.
- Providing professional advice and assistance on safety matters.
- Ensure by prepare and disseminate guidance materials to the Air Navigation Services providers to perform accordingly.

APPENDIX-8

DETERMINNING STAFF NEEDS FOR SAFETY OVERSIGHT

1. Objectives

Staffing standards denote the concept of total number of personnel to fill specified task/job without regard for quality or skill levels. It refers to the numbers of personnel of various job categories deemed appropriate to staff its facilities. Staffing standard is all about determining and providing the number of personnel in various categories that an organization needs to accomplish its goals.

2. Setting staffing standards

Mechanism to prove the allocation of sufficient number of safety inspectors in the Directorate

1. Determine Net working days per year

   365 – (National holidays + weekends + Annual leave + Sick leave+ Training sessions)

2. Determine annual effective (available) working hours of safety oversight inspectors:

   Net working days – (National holidays + weekends + Annual leave + Sick leave+ Training sessions) X 6 hours/ day) = Total Effective Annual inspection time available per inspector

3. List down all activities and tasks that are required /planned to be performed by each Inspector Category; repeatedly measure and calculate the average time to finish a single planned or required activity.

i. Air Navigation Regulation Safety Oversight Process

Activities	Time required	Responsible person	comments
Initiating the audit • Appoint team leader • Define objectives, scope, criteria • Can we do it?	3hr*1=3hrs	Directorate	1 airport/year
Review Documentation	4hrs*5=20hrs	Team leader	>>
Preparing for on-site audit activities • Prepare audit plan • Assign work to audit team • Prepare check list and working documents	6hrs*1=6hrs 6hrs*3=18hrs	Team leader ANRD Inspectors	>>
Conducting on –site activities • Conduct opening meeting • Collect information • Generate audit finding • Analysis of the finding • Conduct closing /exit meeting	5hrs*5=25hrs	Team leader and ANRD Inspectors	>>
Preparing and distributing of the audit report • Prepare report • Distribute report	6hrs *5=30hrs	ANRD Inspectors	>>
Evaluate submitted action plan	6hrs*1=6hrs	Team leader and ANRD Inspectors	>>
Completing the audit • Keeping records	1hrs*5=5hrs	ANRD Inspector	>>

Reviewing audit • Follow-up on corrective actions • Audit performance consideration	24hrs*5=120hrs	ANRD Inspectors	>>
Closing audits	5hrs*5=25hrs	ANRD inspectors	>>
	Total:258hrs		

II. Air Navigation regulation Safety Inspection Process

No	Activities	Time required	Expert required	comments
1	Preparing Inspection Checklist	12hrs	ANRD Inspectors	11airports/year
2	Inspecting ATS,SAR,AIS,MET and CNS	15hrs each	>>	3 international airports twice a year and 1 international airport every quarter of a year
3	Inspecting ATS,SAR and CNS	12 hrs	>>	Once a year at 7 domestic airports
4	Analyzing and Writing finding report	55 hrs	>>	11 air ports
5	Evaluating ANS service providers corrective action plan	12hrs	>>	11 air ports
6	Follow up activities	30hrs	>>	11 airports
7	Closing findings	40hrs	>>	11 airports
		Total:176		

The maximum numbers of inspectorate staff required are two persons in each area of expertise.

Staff	Number required	Number Available	Shortage/Recruitment
ATS and SAR	2	1	1
AIS	2	2	--
CNS	2	1	1
MET	1	1	--
PANS -OPS	1	1	--

4. Determine the average (standard) man-hour (m/h) required to perform total volume of required/planned activities per year under each directorate or supervisor:

Number of Planned/required inspection activities by type of activity/per year X average man-hour required to perform a single unit of activity

5. Calculate the required number of hours to effectively carryout the planned/required aviation safety inspection activities and compare with the available effective inspection time

(#3 X# 4) ≈ (#2 X No. of inspectors by category)

434x6=2604x1

Based on the above information for the time being there is a work load in the area of ATS and SAR Inspectorate until the recruitment process is completed the Pans –ops inspector have got the ATS back ground and he can assist the ATS and SAR inspector . To fill the required number of staff the recruitment process will be arranged according the plan of the ANRD and the HR Directorate.

APPENDIX-9

Corrective Action Plan Tracking Forms

Finding	No.	Audit/Inspection Finding	Description	Action	Target Date

APPENDIX-10

ANR Audit/Inspection Finding Form

Company Name	Base Location	Date	Reference No.
Area of inspection (check list)			**Finding Number**
Non-Conformance with **Which state** ☐ **which state in part** ☐			
Example(s): .			
Corrective action plan required by:-			date
Inspector name (S) :-			date