



**TECHNICAL STANDARDS
TENTATIVE SAFETY OVERSIGHT
AUDIT/INSPECTION PLAN 2020**

PLAN

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OFFICE OF PRIME INTEREST : TECHNICAL STANDARDS BRANCH, AAR DIRECTORATE

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TYPE OF DOCUMENT	PLAN (PLN)		
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1. PURPOSE:

The purpose of this document is to issue a tentative plan for Annual Safety Oversight Audit (SOA) / Inspection of Service Providers of Communication, Navigation and Surveillance (CNS) systems & Communications Operations in accordance with ANO-001-ARTS and CNS Inspectors Handbook (MNL-001-ARTS).

2. SCOPE:

The Technical Standards (TS) Tentative Safety Oversight Audit / Inspection Plan is applicable, as per Para-4 and 10, to all airports/locations providing CNS & Com-Ops services.

3. OBJECTIVE OF SAFETY OVERSIGHT AUDIT / INSPECTION:

3.1 The objective of safety oversight audit / inspection is to assess compliance of CNS/Com-Ops Service Provider and its services to Primary Aviation Legislation, National Regulations and relevant ANOs/Manuals including, but not limited to, the following documents:

- 3.1.1 ANO-001-ARTS (Communication, Navigation & Surveillance)
- 3.1.2 ANO-002-ARTS (Radio Navigation Aids)
- 3.1.3 ANO-003-ARTS (Communication Procedures)
- 3.1.4 ANO-004-ARTS (Communication System-Digital Data & Voice Data)
- 3.1.5 ANO-005-ARTS (Surveillance and Collision Avoidance Systems)
- 3.1.6 ANO-006-ARTS (Frequency Spectrum Utilization)
- 3.1.7 ANO-008-ARTS (Certification Requirements for CNS Facility Service Providers)
- 3.1.8 ANO-009-ARTS (Requirement of Communication Operation Manual)
- 3.1.9 ANO-010-ARTS (Requirements OF "CNS Engineering Manual" for Airport / Location)
- 3.1.10 MNL-002-ARTS Manual on testing of Radio Navigation Aids
- 3.1.11 MNL-003-ARTS NOTAM Format & Procedures
- 3.1.12 MNL-004-ARTS Manual on Air Traffic Safety Electronics Personnel (ATSEP)
- 3.1.13 Technical documents including Operation & Maintenance Manuals of OEM.
- 3.1.14 CAAOs, Manuals, Procedures, Work Instructions (WIs) issued by the CNS / Com-Ops service provider's organization.
- 3.1.15 Standards with respect to qualification, competence and skill level of the personnel.

4. CRITERIA FOR THE INSPECTION OF AIRPORTS/LOCATIONS:

- 4.1 CNS/Com-Ops inspectors will carry out audits / inspections of following areas / airports / locations:
- 4.1.1 Civil airports / locations operated by PCAA, providing CNS / COM OPS related services
 - 4.1.2 Civil airports certified for Regular Public Transport (RPT) operations by a private or public entity, providing CNS / COM OPS services in Pakistan
 - 4.1.3 Maintenance organizations / units, providing repair & maintenance services of CNS Systems
 - 4.1.4 Training Organizations and Institutes to the extent of trainings provided for the upkeep and maintenance of CNS systems including basic, advance and refresher

courses.

- 4.1.5 Training Organizations and Institutes to the extent of trainings provided to the personnel for provisioning of communication operations services including basic, advance and refresher courses.
- 4.1.6 Relevant head offices of the CNS service providers.
- 4.1.7 Annual Audit/Inspection Oversight Plans will be prepared based on the following:
- 4.1.7.1 Airports having major CNS facilities/operations, CNS/Com-Ops Head Offices, Training facilities, Repair Maintenance Organizations will be audited annually.
- 4.1.7.2 Rest of the airports with medium level CNS facilities / operations and other small airports/stand-alone CNS facilities will be audited biennially (once every two years).
- 4.1.7.3 The list of auditable airports/locations is given below:

AUDITABLE LOCATIONS/AIRPORTS		
Sr. No	ANNUAL	BIENNIAL
1.	HQCAA/EED	Hyderabad Airport*
2.	JIAP Karachi	SZIAP Rahim Yar Khan
3.	AIIP Lahore	SSR Lakpass
4.	IIAP Islamabad	SSR Rojhan
5.	MIAP Multan	SSR Pasni
6.	FIAP Faisalabad	EVHF Laramtop
7.	QIAP Quetta	DI Khan Airport*
8.	BKIAP Peshawar	Panjgur Airport*
9.	CATI	Nawabshah Airport*
10.	Sialkot Airport	Zhob Airport*
11.		NDB Chore
12.		Bahawalpur
13.		DG Khan Airport
14.		Gawadar Airport
15.		Cherat VHF
16.		Gilgit Airport
17.		Skardu Airport
18.		Chitral Airport
19.		Dalbandin Airport
20.		Turbat Airport
21.		BNB Sukkur
22.		Moenjodaro Airport*
23.		NDB Sheikhpura
24.		NDB Gharo
25.		NDB Cape Monze

***Note:** Airports will be included in annual Safety Oversight Plan subject to flight operation.

5. REFERENCE LIST OF CNS SYSTEMS:

5.1 Following is the list of CNS systems with reference documents to be used during Safety Oversight Audit / Inspection.

Sr. No.	SYSTEMS	REFERENCE DOCUMENTS
<u>COMMUNICATION SYSTEMS:</u>		
1.	<u>COMMUNICATION SYSTEMS FOR AERONAUTICAL BROADCAST SERVICE:</u> a. Meteorological information for aircraft in flight (VOLMET). b. Automatic Terminal Information Service (ATIS).	ICAO Annex-10 Vol-II ICAO Annex-10 Vol-III ICAO ROBEX Handbook ANO-003-ARTS ANO-004-ARTS
2.	<u>COMMUNICATION SYSTEMS FOR AERONAUTICAL FIXED SERVICES:</u> a. Hotlines (ATS Direct Speech Circuits (DSC) / Switched Hotlines). b. Aeronautical Fixed Telecommunication Network (AFTN). c. Aeronautical Message Handling System (AMHS)	ICAO Annex-10 Vol-II ICAO Annex-10 Vol-III ICAO Doc 9880 ANO-003-ARTS ANO-004-ARTS
3.	<u>COMMUNICATION SYSTEMS FOR AERONAUTICAL RADIO SERVICES:</u> a. HF SSB air-ground two-way communication b. HF SSB ground-ground two-way communication c. HF RT (High Power) two-way communication d. HF SSB VOLMET Broadcast e. VHF air-ground two-way communication f. VHF ground-ground two-way communication g. UHF air-ground two-way communication h. Extended Range VHF System (EVHF) i. Extended Range UHF System (EUHF)	ICAO Annex-10 Volume-II ICAO Doc 9432 ANO-003-ARTS
4.	<u>AERONAUTICAL TELECOMMUNICATION NETWORK:</u> a. Telephone Exchange b. Intercom c. Voice/Data Networks	ANO-004-ARTS ANO-008-ARTS
5.	<u>VOICE RECORDING SYSTEMS:</u> a. Digital Voice Logging System (DVLS)	
<u>NAVIGATION:</u>		
6.	<u>INSTRUMENT LANDING SYSTEM (ILS):</u> a. Localizer b. Glide Slope c. Terminal Distance Measuring Equipment (TDME) d. Markers Beacons	ICAO Annex-10 Vol-I ICAO Doc 8071 Vol-I ANO-002-ARTS
7.	<u>EN-ROUTE/APPROACH RADIO NAVAIDS EQUIPMENT</u> a. Conventional VOR (CVOR) b. Doppler VOR (DVOR) c. Distance Measuring Equipment (DME)	ICAO Annex-10 Vol-I Doc 8071 Vol-I ANO-002-ARTS

Sr. No.	SYSTEMS	REFERENCE DOCUMENTS
8.	BEACONS: a. Non-Directional Beacon (NDB) b. Locater Beacon c. Holding beacon	
9.	AIRPORT WEATHER OBSERVATION SYSTEM (AWOS):	ANO-008-ARTS
<u>SURVEILLANCE:</u>		
10.	a. Primary Surveillance Radar (PSR) b. Secondary Surveillance Radar (SSR) c. Automatic Dependent Surveillance-Broadcast (ADS-B) d. Multi-Lateration (MLAT) e. Surface Movement Radar (SMR)	ICAO ANNEX -10 Vol -IV ANO-005-ARTS Doc 8071 (Vol-III) Testing of Surveillance Radar Systems. DOC-9476 (SMGCS) DOC-9830 (A-SMGCS) DOC-9871 (Technical Provisions of Mode-S) DOC-9684 (Manual on SSR System) DOC-9871 (Technical Provision of Mode S services and Extended squitter) DOC-9924 (Aeronautical Surveillance Manual) SAT & FAT Reports / OEM Manuals
11.	AIR TRAFFIC MANAGEMENT SYSTEM: a. Air Traffic Management System (ATM) b. Voice Communication & Control System (VCCS) c. ATM Video Data Recorder & Reproducer d. VCCS Voice Recorder & Reproducer	Doc-4444 (PANS-ATM) ANO-004-ARTS
<u>TERMINAL FACILITIES:</u>		
12.	a. Airport Facility Control & Monitoring (AFCoM) system. b. Flight Information Display System (FIDS) c. Automatic Fire Detecting System (AFDS)	ANO-008-ARTS
<u>AUXILIARY/SUPPORT SYSTEMS USED IN SUPPORT OF CNS</u>		
13.	a. Main Power Supply system (Primary/Secondary Feeder) b. Standby Power Supply System (Generators) c. Automatic Voltage Regulators (AVR's) d. Uninterrupted Power Supply (UPS) e. HVAC / Air Conditioning System for CNS Equipment / installations	ANO-008-ARTS

- 5.2 Checklist will be provided to auditees for self-assessment prior to conduct of SOA / Inspections i.e. onsite verification. The same will be communicated (through email or any other mode/ method of communications) to the airports/locations.

6. AWARENESS SESSIONS/WORKSHOPS

- 6.1 Awareness sessions/workshops will be conducted on SOA /Inspection methodology and checklists related to ANOs and National Regulations as well as on Corrective AP submission. Heads/representatives of CNS / Com-Ops units of major airports and locations such as JIAP, IIAP, AIIAP, SIAL, HQCAA, CATI, EED etc. will be invited to participate. During the session, feedback/suggestion of the participants will also be sought for improvement in SOA mechanism.

7. METHOD OF AUDIT / INSPECTION:

- 7.1 Safety Oversight activity will comprise the following phases:
- 7.1.1 Self-assessment by the auditee on the checklist along with submission of relevant documentary evidence
 - 7.1.2 Evaluation of Self-assessment by relevant inspector of TS DAAR
 - 7.1.3 On-site verification on the basis of self-assessment
 - 7.1.4 Follow-up to ensure compliance
- 7.2 On-site verification activities may include the techniques for evidence/information gathered during SOA/ Inspection as follows:
- 7.2.1 Examination and assessment of all related documentation and records
 - 7.2.2 Interviews with CNS / COM OPS officials.
 - 7.2.3 Any other related observation by the inspector during visit of site.
- 7.3 The finding(s) / observation(s) along with evidence will be shared with the auditee / his representative in a closing meeting.
- 7.4 The airports / locations will provide feedback on prescribed proforma CAAF-003-ARTS-1.0 about inspection / findings for improvement of Safety Oversight mechanism.

8. POST AUDIT ACTIVITIES / PROCESSES:

- 8.1 The respective TS Inspector will submit Safety Oversight Audit / Inspection report to the Director Airspace & Aerodrome Regulations (D.AAR) for approval within ten (10) working days after completion of inspection.
- 8.2 The inspector shall distribute the approved report in hard / soft copy on Form CAAF-0014-ARTS to all concerned within next three (03) working days.
- 8.3 The concerned airport/location is required to submit Corrective Action Plan (CAP) within thirty (30) working days from issuing date of the report.
- 8.4 Corrective Action Plan (CAP) received from concerned airport/location, will be evaluated by the concerned Inspector at TS DAAR.
- 8.4.1 If the evidence attached with the CAP is sufficient to satisfy the finding, it will be closed, with the approval of the competent authority, as per DAAR procedures.
 - 8.4.2 In case, Corrective Action Plan (CAP) submitted by the auditee against a finding has a reasonable timeline, then such finding will remain open till corrective action is completed
 - 8.4.3 In case, the corrective action is submitted by the auditee without provision of evidence (for practical reasons), the finding will remain open till onsite verification.

9. DISTRIBUTION OF SOA / INSPECTION PLAN:

- 9.1 The tentative Annual Safety Oversight Plan will be promulgated to all concerned airports / locations as soon as finalized and approved by D.AAR.
- 9.2 The actual date of visit and name of Inspectors will be intimated to the concerned airports / locations at least one week prior to the visit after finalization of approval / flights, etc.
- 9.3 Utmost efforts should be made to avoid changes to the tentative plan. Whenever unavoidable circumstances necessitate any change, timely liaison to be made with the relevant airport/location.

10. SAFETY OVERSIGHT AUDIT/INSPECTION PLAN 2020:

10.1 The tentative Safety Oversight Audit/Inspection Plan for the year 2020 is given below:

SR No	STATION	AREA OF INSPECTION	NO OF DAYS (EJP)	NO OF INSPECTORS	TENTATIVE MONTH
1	HQCAA (Com. Ops. Branch & CNS Dte.)	Com-Ops, Nav aids, Radar, Networks and T&E Branches	02	03	Feb
2	EED JIAP Karachi	Com-Ops, Nav aids, Radar, Networks and T&E	02	05	Feb
3	D. I. Khan / BKIAP Peshawar	Com-Ops, Nav aids, T&E	1+2	02	Feb
4	D. G. Khan / MIAP Multan / Bhawalpur	Com-Ops, Nav aids, T&E	1+2+1	02	March
5	JIAP Karachi	Com-Ops, Nav aids, Surv, T&E	03	04	March
6	AllAP Lahore	Com-Ops, Nav aids, Surv, T&E	03	04	March
7	Dalbandin	Com-Ops, Nav aids, T&E, EVHF	01	02	April
8	IIAP Islamabad	Com-Ops, Nav aids, Surv, T&E	03	04	April
9	FIAP Faisalabad	Com-Ops, Nav aids, EVHF, T&E	02	03	April
10	CATI	Com-Ops School School of Electronics, Radar Simulator	02	03	June
11	Nawabshah	Com-Ops, Nav aids, T&E	01	02	July
12	Skardu	Com-Ops, Nav aids, T&E	02	02	July
13	Chitral/Cherat App	Com-Ops, Nav aids, T&E	01	02	Aug
14	Quetta	Com-Ops, Nav aids, T&E	02	02	Aug
15	Panjour	Com-Ops, Nav aids, T&E	01	02	Dec
16	Sialkot	Com-Ops, Nav aids, T&E	02	02	Dec

Notes:

- a) On-site audit activity is not planned in May 2020 due to RAMADAN.
- b) On-site audit activity is not planned in Sept, Oct & Nov 2020 due to ICAO USOAP activities

Interpretation & Definitions:

- a) COM-OPS means Communication Operations
- b) COM-SYS means Communication System / Equipment including HF, VHF, UHF, VLS/DVLS
- c) Nav aids means Radio Navigational Systems / Equipment including NDB, DVOR/CVOR, DME, ILS, GNSS
- d) SURV means Surveillance System / Equipment including Radars (PSR / SSR), ADS-B, ATM System / Equipment /Voice communications
- e) E-VHF means Extended VHF Equipment and associated facilities for Radar/ Non Radar / Area Control
- f) T & E means Telecom & Electronics Systems including Telephone Exchange, Data & Cable Networks,

10.2 RANDOM / SURPRISE INSPECTIONS:

10.2.1 Surprise inspections/visits will be carried out randomly on any airport/location for the purpose, but not limited to the following:

- 10.2.1.1 when there is a major breakdown of a CNS facility
- 10.2.1.2 prior to commissioning of a new CNS facility
- 10.2.1.3 when there are major outstanding findings
- 10.2.1.4 CAPs are not submitted by the auditee

11. IMPLEMENTATION:

This Safety Oversight Audit/Inspection Plan PLN-004-ARTS-4.0 supersedes the PLN-004-ARTS-3.0 dated 1st July 2019 and shall be implemented with effect from **1st January 2020**.

Dated: _____

(JAVED AZIZ FAROOQI)
Acting Director
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(ENGR. ZULFIQAR ALI MIRANI)
Additional Director
Technical Standards – DAAR

Dated: _____

File No. HQCAA/1122/702/ARTS/I