

Extraordinary



Federal Republic of Nigeria Official Gazette

No. 175

Lagos -12th December, 2015

Vol. 102

Government Notice No. 128

The following is published as supplement to this *Gazette* :

<i>S. I. No.</i>	<i>Short Title</i>	<i>Page</i>
36	Part 12—Aerodrome Regulations	B2043-2136

Printed and Published by The Federal Government Printer, Lagos, Nigeria
FGP 26/32016/650

Annual Subscription from 1st January, 2015 is Local : ₦25,000.00 Overseas : ₦37,500.00 [Surface Mail] ₦49,500.00 [Second Class Air Mail]. Present issue ₦1,500 per copy. Subscribers who wish to obtain *Gazette* after 1st January should apply to the Federal Government Printer, Lagos for amended Subscriptions.

B 2042

NIGERIA CIVIL AVIATION REGULATIONS

PART 12—AERODROME REGULATIONS

INTRODUCTION

Part 12 provides for the certification of Aerodromes and Heliports and the issuance of operating certificate.

Part 12 is presented in 13 sections dealing with Aerodrome Certification, Aerodrome Manual, Aerodrome Design Requirements, Obligations of Aerodrome Operator, Operation of a Heliport, Heliport Certification, Heliport Manual, Heliport Design Requirements and Obligations of a Heliport Operator.

These Regulations incorporate the Standard and Recommended Practices (SARPs) in Annex 14 to the Chicago Convention as well as the provisions of the Aerodrome Standards Manual (ASM).

B 2044

NIGERIA CIVIL AVIATION REGULATIONS

PART 12—AERODROME REGULATIONS



ARRANGEMENT OF CONTENT

Contents :

- 12.1. General.
- 12.1.1. Applicability.
- 12.1.2.1. Definitions.
- 12.1.2.2. Abbreviations.
- 12.1.3. Establishment of Aerodromes in Nigeria.
- 12.1.4.1. Design/Operation of Aerodromes.
- 12.1.4.2. Restrictions.
- 12.1.6.1. Prohibitions.
- 12.1.7.1. Obstacle Restriction and Removal.
- 12.1.8.1. Register of Aerodromes and Aerodromes Certificates.
- 12.2. Exemptions.
- 12.3. Aerodrome Certification.
- 12.3.1. Requirement for an Aerodrome Certificate.
- 12.3.2. Application for an Aerodrome Certificate.
- 12.3.3. Grant of an Aerodrome Certificate.
- 12.3.4. Refusal to grant an Aerodrome Certificate.
- 12.3.5. Duration of an Aerodrome Certificate.
- 12.3.6. Renewal of an Aerodrome Certificate.
- 12.3.7. Suspension of an Aerodrome Certificate by the Authority.
- 12.3.8. Revocation of an Aerodrome Certificate by the Authority.
- 12.3.9. Transfer of an Aerodrome Certificate.
- 12.3.10. Voluntary Surrender of an Aerodrome Certificate.
- 12.3.11. Endorsement of Conditions of an Aerodrome Certificate.
- 12.3.12. Amendment of an Aerodrome Certificate.
- 12.3.13. Interim Aerodrome Certificate.
- 12.4. Aerodrome Manual.
- 12.4.1. Preparation of the Aerodrome Manual.
- 12.4.2. Information to be included in the Aerodrome Manual.
- 12.4.3. Location of the Aerodrome Manual.
- 12.4.4. Amendment of the Aerodrome Manual.
- 12.4.5. The Authority's acceptance/approval of the Aerodrome Manual.
- 12.4.6. Aerodrome Manual Controller.

B 2046

- 12.5. Aerodrome Design Requirements.
- 12.6. Obligations of The Aerodrome Operator.
 - 12.6.1. General.
 - 12.6.2. Compliance with Standards and Practices.
 - 12.6.3. Competence of Operational and Maintenance Personnel.
 - 12.6.4. Aerodrome Operations and Maintenance.
 - 12.6.5. Aerodrome Operator's Safety Management System.
 - 12.6.6. Aerodrome Operator's Internal Safety Audits and Reporting.
 - 12.6.7. Access to the Aerodrome by Authorised Inspectors.
 - 12.6.8. Removal of obstructions from the Aerodrome Surface.
 - 12.6.9. Warning Notices.
 - 12.6.10. Retention of records.
 - 12.6.11. Aerodrome Data.
 - 12.6.12. Notifying and reporting.
 - 12.6.13. The Aerodrome operator shall:
 - 12.6.14. The Aerodrome operator shall:
 - 12.6.15. Aerodrome Emergency Plan.
 - 12.6.15.1. General.
 - 12.6.15.2. Content of the AEP.
 - 12.6.15.3. On-Scene Commander.
 - 12.6.15.4. Aircraft Crash Charts and Aerodrome Grid Maps.
 - 12.6.15.5. Personnel and Training.
 - 12.6.15.6. Testing of the Emergency Plan.
 - 12.6.15.7. Authorisation.
 - 12.6.16.1. Rescue and Fire-Fighting at Aerodromes.
 - 12.6.16.2. Hours of Operation of an Aircraft Fire-fighting Service.
 - 12.6.16.3. Aircraft Category for Fire Fighting.
 - 12.6.16.4. Statistics on the Number of Passengers and Aircraft Movements.
 - 12.6.16.5. Critical Category for Fire Fighting.
 - 12.6.16.6. Extinguishing Agents and Aircraft Fire-Fighting Vehicles.
 - 12.6.16.11. Communication and Alerting System.
 - 12.6.17. Apron Control and Management Services.
 - 12.6.18. Ground Vehicles and Pedestrians.
 - 12.6.19. Protection of Navigation and Landing Aids.
 - 12.6.20. Aerodrome Inspection Programme.
 - 12.6.21. Public Protection and Aerodrome Security.
 - 12.6.22. Aeronautical Studies.
 - 12.6.23. Aerodrome Wildlife Planning and Management.
 - 12.6.23.1. Application.
 - 12.6.23.2. Wildlife Strikes.
 - 12.6.23.3. Risk Analysis.
 - 12.6.23.4. Aerodrome Wildlife Management Plan.
 - 12.6.23.4.1. General.

- 12.6.23.4.2. Content.
- 12.6.23.4.3 Training.
- 12.6.23.4.4. Communication and Alerting Procedure.
- 12.6.24. Pavement Strength and Overload Operations.
- 12.6.25 Quality Control Programme.
- 12.6.26. Environmental Protection.
- 12.6.27. Removal of Disabled Aircraft.
- 12.6.28 Handling and Storage of Aviation Fuel/Ground servicing of aircraft.
- 12.7. Use of Heliports.
- 12.7.1. General.
- 12.7.2 Establishment of Heliports in Nigeria.
- 12.8.1. Design/Operation of Heliports.
- 12.8.2 Restrictions/Prohibitions.
- 12.9 Exemptions.
- 12.10. Heliport Certification.
- 12.10.1 Requirement to hold Heliport Certificate.
- 12.10.2. Application for Heliport Certificate.
- 12.10.3. Grant of Heliport Certificate.
- 12.10.4. Refusal to grant Heliport Certificate.
- 12.10.5. Duration of Heliport Certificate.
- 12.10.6. Renewal of Heliport Certificate.
- 12.10.7 Suspension of Heliport Certificate by the Authority.
- 12.10.8 Revocation of Heliport Certificate by the Authority.
- 12.10.9. Endorsement of Condition on Heliport.
- 12.10.10. Certificate amendment of Heliport Certificate.
- 12.10.11. Voluntary Surrender of Heliport Certificate.
- 12.10.12 Transfer of Heliport Certificate.
- 12.10.13 Interim Heliport Certificate.
- 12.11. Heliport Manual.
- 12.11.1. Preparation of Heliport Manual.
- 12.11.2 Location of Heliport Manual.
- 12.11.3. Information to be included in the Heliport Manual.
- 12.11.4. Form of Heliport Manual.
- 12.11.5 Amendments of Heliport Manual.
- 12.11.6. Notice of Amendments.
- 12.11.7. The Authority's acceptance/approval of the Heliport Manual.
- 12.11.8. Heliport Manual Controller.
- 12.12 Heliport Design Requirements.
- 12.13. Obligations of the Heliport Operator.
- 12.13.1. Compliance with standards and practices.
- 12.13.2. Competence of Operational and Maintenance Personnel.
- 12.13.3 Heliport operation and maintenance.

B 2048

- 12.13.4. Heliport Operator's Safety Management System.
- 12.13.5. Heliport Operator's Internal System Audit/ Reporting.
- 12.13.6. Access to the Heliport.
- 12.13.7. Heliport Inspection.
- 12.13.8. Obstacle Environment.
- 12.13.9. Public Protection and Heliport Security.
- 12.13.10. Heliport Data.
- 12.13.11. Notifying and Reporting.
- 12.13.12. Physical Characteristics.
- 12.13.13. Visual Aids.
- 12.13.14. Rescue and Fire Fighting at Heliports.
- 12.13.15. Heliport Emergency Management Systems.
- 12.13.16. Aeronautical Studies.

IMPLEMENTING STANDARDS (IS)

- IS 12.4.2.— Information to be Included in the Aerodrome Manual.
 - 1. General.
 - 2. Particulars of the Aerodrome Site.
 - 3. Particulars of the Aerodrome required to be Reported to the Aeronautical Information Service (AIS).
 - 3.1 General Information.
 - 3.2. General information, including the following :
 - 4. Particulars of the Aerodrome Operating Procedures and Safety Measures.
 - 4.1. Aerodrome Reporting.
 - 4.2. Access to the Aerodrome Movement Area.
 - 4.3. Aerodrome Emergency Plan.
 - 4.4. Rescue and Fire-fighting.
 - 4.6. Visual Aids and Aerodrome Electrical Systems.
 - 4.7. Maintenance of the Movement Area.
 - 4.8. Aerodrome Works—Safety.
 - 4.9. Apron Management.
 - 4.10. Apron Safety Management.
 - 4.11. Airside Vehicle Control.
 - 4.12. Wildlife Hazard Management.
 - 4.13. Obstacle Control.
 - 4.14. Removal of Disabled Aircraft.
 - 4.15. Handling of Hazardous Materials.
 - 4.16. Low-Visibility Operations.
 - 4.17. Protection of Sites for Radar and Navigational Aids.
 - 5. Aerodrome Administration and Safety Management System.
 - 6. Memorandum of Understanding with Designated Service Providers.

- IS 12.6.16.6 (a) Extinguishing Agents and Equipment.
- IS 12.6.16.10 (b) Training of Personnel.
- (2) Site-Specific Training.
- IS 12.6.16.10 (d) Fire Fighter Qualifications.
- IS 12.6.16.13 Communication and Alerting System.
- IS 12.6.23.1 Wild Life Planning Management-Application.
- IS 12.6.23.3 Risk Analysis.
- IS 12.6.23.4.3. Training.
- IS 12.6.23.4.4. Communication and Alerting Procedure.
- IS 12.11.3. Information to be Included in Heliport Manual.

B 2050

NIGERIA CIVIL AVIATION REGULATIONS

PART 12—AERODROME REGULATIONS

12.1. GENERAL

12.1.1. This Part shall apply to :

Applicability.

(i) civil aerodromes ;

(ii) military aerodromes serving civil aircraft operations ; and

(iii) those portions of joint-use or shared-use aerodromes under the control of an individual or civil entity and serving civil aircraft operations of any class or category.

12.1.2.1.—(a) For the purpose of this Part, the following definitions shall apply :

Definitions.

(1) *Aerodrome*—A defined area on land or water including any building, installations and equipment, intended to be used either wholly or in part for the arrival, departure, and surface movement of aircraft.

(2) *Aerodrome Beacon*—Aeronautical beacon used to indicate the location of an aerodrome from the air.

(3) *Aerodrome Certificate*—The certificate to operate an aerodrome issued by the Authority subsequent to the approval of the aerodrome operator's manual.

(4) *Aerodrome Elevation*—The elevation of the highest point of the landing area.

(5) *Aerodrome Facilities and Equipment*—Facilities and equipment, inside or outside the boundaries of an aerodrome, that are constructed or installed and maintained for the arrival, departure, and surface movement of aircraft.

(6) *Aerodrome Operator*—The owner or provider of an aerodrome that is certified for operations by the Authority.

(7) *Aerodrome Manual*—The Manual that forms part of the application for an aerodrome certificate pursuant to these regulations, including any amendments thereto acceptance/approval by the Authority.

(8) *Aerodrome Reference Point*—The designated geographical location of an aerodrome.

(9) *Aerodrome Standards Manual*—A document containing the Aerodrome Standards consistent with the provisions of ICAO Annex 14 Volumes I and II pertaining to the planning, operations and maintenance of aerodrome services, facilities and equipment, to be complied with, by the aerodrome operators.

B 2052

(10) *Aeronautical Study*—A study of an aeronautical problem to identify possible solutions and select a solution that is acceptable without degrading safety.

(11) *Aeroplane*—A power driven heavier-than-air aircraft deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(12) *Aircraft*—Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

(13) *Aircraft Stand*—A designated area on an apron intended to be used for parking an aircraft.

(14) *Air Taxiway*—A defined path on the surface established to permit the movement of helicopters above it while remaining in ground effect at ground speeds not exceeding 37km/h (20kt).

(15) *Air Transit Route* —A defined path on the surface established to permit the movement of helicopters above it, normally at heights not above 30m (100ft) above ground level and at ground speeds in excess of 37 km/h (20kt).

(16) *Approach Surface*—An inclined plane or a combination of planes sloping upwards from the end of the safety area, centered on a line passing through the centre and through which no obstacle may penetrate.

(17) *Apron*—A defined area on an aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

(18) *Apron Management Service*—A service provided to regulate the activities and the movement of aircraft and vehicles on an apron.

(19) *Authority*—Refers to the Nigerian Civil Aviation Authority.

(20) *Aviation Height Clearance (AHC)*—An official permission granted by the Authority to an applicant prior to the commencement of construction or erection of a structure within the Nigerian Airspace.

(21) *Balloon*—A lighter than air aircraft that is not engine driven and that sustains flight through the use of either gas buoyancy or an airborne heater; or an extremely flexible bag that can be inflated with a gas, such as helium, hydrogen, nitrous oxide, oxygen, or air to make it afloat.

(22) *Certified Aerodrome*—An aerodrome whose operator has been granted an aerodrome certificate by the Authority.

(23) *Crane*—A specially made machine with a long arm that is used by workers for lifting and moving heavy objects.

(24) *Elevated Heliport*—An area on a raised structure on land designated for the arrival and departure of helicopters.

(25) *Emergency Operations Centre*— A designated area on the aerodrome used in supporting and coordinating operations at aerodrome emergencies.

(26) *Full-scale Emergency Exercise*—Assembling and utilisation of all the resources that would be available and used in a real emergency.

(27) *Final Approach and Take-off Area (FATO)*—A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. And, where the FATO is to be used by performance Class 1 helicopters, it includes the Rejected Take-Off Area .

(28) *Frangible Object*—An object of low mass designed to break, distort, or yield on impact so as to present the minimum hazard to aircraft.

(29) *Ground Effect*—The reaction to the downward airflow through the helicopter rotor striking the ground or water, which enhances the lift forces acting on the helicopter.

(30) *Ground Taxiway*—A defined path on the surface established to permit the movement over the ground of wheeled helicopters under their own power.

(31) *Hangar*—A shelter, specifically, built for housing or repairing aircraft.

(32) *Helicopter*—A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power driven rotors on substantially vertical axis.

(33) *Helicopter Clearway*—A defined area on the surface beyond the Rejected Take-Off Distance Available (RTODAH) and under the control of the appropriate authority, selected and/or prepared as a suitable area over which a performance Class 1 helicopter may accelerate and achieve a specific height and in which lightweight and frangible objects only are permitted.

(34) *Helideck*—An area located on a floating or fixed structure offshore designated for use by helicopters.

(35) *Heliport*—An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movements of helicopters.

(36) *Heliport Elevation*—The elevation of the highest point of the landing area.

(37) *Heliport Reference Point*—The designated geographical location of a heliport.

(38) *Helicopter Safety Area*—On a heliport, a defined area surrounding the FATO which is free of obstacles, other than those required for air navigation purposes, and intended to reduce the risk of damages to helicopters, accidentally diverging from the FATO.

(39) *High Rise structure*—Any building, mast, tower, hills, trees, crane, hangar, etc. (natural or man-made, permanent or temporary) considered to be of prominent height above ground level.

(40) *Inner Horizontal Surface*—A circular surface located in a horizontal plane above the Final Approach and Take-Off area (FATO) and its environs and designated to allow safe visual manoeuvring by helicopters.

(41) *Joint Use Airport*—Any airport jointly used for both civil and military aircraft operations.

(42) *Landing Area*—The part of a movement area intended for the landing or take-off of aircraft.

(43) *Landing Distance Available (LDAH)*—The length of the (FATO) plus any additional area declared available and suitable for helicopters to complete the landing manoeuvre from a defined height.

(44) *Manoeuvring Area*—That part of an aerodrome to be used for the take-off, landing, and taxiing of aircraft, excluding aprons.

(45) *Marker*—An object displayed above ground level in order to indicate an obstacle or delineate a boundary.

(46) *Marking*—A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.

(47) *Mast*—A tall structure designed to support antennas/aerials for telecommunications and broadcasting; including electricity pylons and poles for wind turbines.

(48) *Movement Area*—That part of an aerodrome to be used for the take-off, landing, and taxiing of aircraft, consisting of the manoeuvring area and the apron.

(49) *Obstacle*—All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft ; or that extend above a defined surface intended to protect aircraft in flight ; or stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

(50) *Obstacle Free Zone (OFZ)*—The airspace above the inner approach surface, inner transitional surfaces and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangibly mounted one required for air navigation purposes.

(51) *Obstacle Limitation Surfaces*—Series of surfaces that define the volume of airspace at and around an aerodrome to be kept free of obstacle in order to permit the intended aircraft operations to be conducted safely and to prevent the aerodrome from becoming unusable by the growth of obstacles around the aerodrome.

(52) *On-scene Commander*—Person designated to take charge of the overall emergency operations.

(53) *Rejected Take-off Distance Available (RTODAH)*—The length of the FATO declared available and suitable for helicopters operated in performance Class 1 to complete a rejected take-off.

(54) *Runway*—A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

(55) *Runway Strip*—A defined area including the runway and stopway, if provided, intended :

- (a) to reduce the risk of damage to aircraft running off a runway ; and
- (b) to protect aircraft flying over it during take-off or landing operations.

(56) *Runway Visual Range (RVR)*—The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

(57) *Shoulder*—An area adjacent to the edge of a pavement so prepared as to provide a transition between the pavement and the adjacent surface.

(58) *Safety Management System*—A system for the management of safety at aerodromes including the organisation structure, responsibilities, procedures, process and provisions for the implementation of aerodrome safety policies by an aerodrome operator, which provides for the control of safety at, and the safe use of the aerodrome.

(59) *Safety Area*—A defined area made up of either a runway or taxiway and the surrounding surfaces that are prepared or suitable for reducing the risk of damage to aircraft in the event of an undershoot, overshoot, or excursion from a runway or the unintentional departure from a taxiway.

(60) *Shared Use Airport*— Any airport owned and operated by the Ministry of Defence, a portion of which is leased to a person or civilian entity for the provision of civil aircraft operations.

(61) *Taxiway Strip*—An area including a taxiway intended to protect an aircraft operating on a taxiway and to reduce the risk of damage to an aircraft accidentally running off the taxiway.

(61) *Tower*—A self-supporting mast of massive dimension in terms of base size and height designed to support antennas/aerials for telecommunications and broadcasting.

B 2056

(62) *Unserviceable Area*—A part of the movement area that is unfit and unavailable for use by aircraft.

(63) *Work Area*—A part of an aerodrome in which maintenance or construction works are in progress.

(64) *Wildlife Hazard*—A potential for a damaging aircraft collision with birds or animals on or near an aerodrome.

Abbreviations.

12.1.2.2.—Abbreviations.

1.	ACN	Aircraft Classification Number
2.	AEP	Aerodrome Emergency Plan
3.	AIP	Aerodrome Information Publication
4.	AIS	Aeronautical Information Services
5.	ASDA	Accelerate-Stop Distance Available
6.	ATC	Air Traffic Control
7.	ATS	Air Traffic Services
8.	AT-VASIS	Visual Approach Slope Indicator System
9.	BRS	Baggage Reconciliation System
10.	DAAS	Directorate of Aerodrome and Airspace Standards
11.	ELT	Emergency Locator Transmitter
12.	FATO	Final Approach and Take-Off Area
13.	FIDS	Flight Information Display System
14.	Ft	Feet
15.	HAPI	Helicopter Approach Path Indicator
16.	IBIS	International Birdstrike Information System
17.	ICAO	International Civil Aviation Organization
18.	ILS	Instrument Landing System
19.	IS	Implementing Standards
20.	Km/h	Kilometer per hour
21.	Kt	Knot
22.	LDA	Landing Distance Available
23.	NCAA	Nigerian Civil Aviation Authority
24.	NOTAM	Notice to Airmen
25.	OFZ	Obstacle Free Zone
26.	PAPI	Precision Approach Path Indicator
27.	PCN	Pavement Classification Number
28.	R/T	Radio Telephony
29.	RTOA	Rejected Take-Off Area
30.	RTODAH	Rejected Take-Off Distance Available (Heliport)
31.	RVR	Runway Visual Range
32.	SMGCS	Surface Movement Guidance and Control Systems
33.	TLOF	Touchdown and Lift-Off Area
34.	TODA	Take-Off Distance Available
35.	TORA	Take-Off Run Available
36.	T-VASIS	Visual Approach Slope Indicator System
37.	VOR	Very High Frequency Omni-directional Radio Range
39.	VAGS	Visual Alignment Guidance System
40.	ASM	Aerodrome Standards Manual

12.1.3.—(a) The Minister may approve the establishment and development of aerodromes anywhere in Nigeria ;

Establishment of Aerodromes in Nigeria.

(b) Roads, approaches, apparatus, equipment, buildings and other accommodations in connection to such aerodromes shall be maintained by the owners in conformity with these regulations and any other requirement as may be prescribed by the Authority from time to time.

12.1.4.1.—(a) No person or corporate entity shall commence construction or reconstruction of an aerodrome without approval of the Authority.

Design/ Operation of Aerodromes.

(b) Pursuant to Regulation 12.1.4.1(a), an applicant shall submit to the Authority the following for evaluation :

(i) aerodrome layout plan, pavements profile, electrical systems, control tower, terminal and other operational buildings ;

(ii) meteorological data from an approved meteorological organisation and detailed wind rose analysis for the runway orientation ;

(iii) pavement markings, lights and signs plans ;

(iv) proof of pavement bearing strength determination as specified in 6.2.6.2 of the Aerodrome Standards Manual ;

(c) No person shall operate an aerodrome in Nigeria specified in section 12.3.1 for take-off and landing of aeroplanes unless such person is a holder of an Aerodrome Certificate granted by the Authority under these Regulations.

(d) The provision of 12.1.4.1(c) above does not include aerodromes owned by the Federal Government which are designated in the Nigeria Aeronautical Information Publication as airstrip and notified as available for take-off and landing of such aircraft in respect of which the Minister has given permission for the particular to take-off or land in accordance with any conditions subject to which such permission may have been granted shall be subject to safety oversight by the Authority.

(e) Operations of airstrips not designated in the Nigeria Aeronautical Information Publication shall be at the users' discretion.

12.1.4.2.—(a) Subject to the approval of the Ministry of Defence, a military Aerodrome and shared-use aerodrome may be authorised by the Authority for use by civil aircraft, upon acceptance/approval of a written application by an individual or civil entity intending to use the facility for civil aviation purposes.

Restrictions.

(b) The approval or authorisation referred to in (a) above may be granted under such condition and for such period, which the Authority may determine, if the Authority is satisfied that the provisions of this regulation have been met and the use of such Aerodrome by such operator will not jeopardise aviation safety.

B 2058

12.1.5.1. The Authority shall restrict or prohibit flights by night from, or at any aerodrome at which adequate facilities for night flights are lacking; or where the terrain or other objects in the vicinity of the aerodrome could cause a hazard to the operation of aeroplanes or helicopters used in night flights.

12.1.5.2. The Authority shall restrict or prohibit operation at an aerodrome either absolutely or subject to any exceptions or conditions that the Authority shall specify, if the restriction is necessary for aviation safety and/or in the public interest.

Prohibitions.

12.1.6.1. Except with the approval of the aerodrome operator, no aircraft operator shall park or abandon used or unused aircraft on the airside of the aerodrome.

12.1.6.2. Except with the approval of the certified aerodrome operator, no person shall :

(a) drive a vehicle into restricted areas of the aerodrome, or the terminal building ; or

(b) obstruct an entrance to or passage in the terminal building in such a manner as to inconvenience other aerodrome users.

12.1.6.3. No person shall, on a certified aerodrome :

(a) obstruct or interfere with the authorised use of the aerodrome ;

(b) obstruct any employee of the aerodrome operator acting in the execution of his or her duty in relation to the aerodrome ;

(c) throw, leave, or drop anything capable of causing injury to any person or damage to property ;

(d) dump any waste matter whatsoever elsewhere other than a place designated and approved for the purpose by the aerodrome operator ;

(e) commit any nuisance, disorderly, or indecent act, write, draw or affix any profane, obscene or abusive materials on aerodrome ;

(f) spill or release substances capable of causing air, water, or soil pollution.

12.1.6.4. Except with permission of the certified aerodrome operator, no person shall :

(a) interfere or tamper with any part of the aerodrome or any equipment associated with the operation of the aerodrome ;

(b) gain access through restricted structures ;

(c) carry out trade of any level and magnitude including foreign exchange ;

(d) advertise in the aerodrome ;

(e) handle passengers and baggage, or confront passengers and aerodrome users for unsolicited service.

12.1.6.5. Except with the approval of the aerodrome operator, no person shall supply any fuel to any aircraft except at a place and in a manner approved by the aerodrome operator.

12.1.6.6. The aerodrome operator shall subject any approval granted under this subsection to compliance with such conditions as the aerodrome operator may impose in order to safeguard the safety of persons and property on the aerodrome.

12.1.7.1. OBSTACLE RESTRICTION, REMOVAL AND ALTERATION.

12.1.7.1.1. The Authority may regulate or prohibit any structure which by virtue of its height, location or position is considered to constitute a hazard to air navigation.

Obstacle
Restriction,
Removal and
Alteration.

12.1.7.1.2. Any person who proposes any of the following construction or alteration shall notify the Authority of :

(a) Any high-rise construction or alteration above the ground level at its site ;

(b) Any construction or alteration which extends above an obstacle limitation surface prescribed in Chapter 8 of the Aerodrome Standards Manual ;

(c) Any highway, railroad or other transverse way for mobile objects of which if adjusted upwards 4.8m for roads and highways, 5.4m for railroads or the height of the highest mobile object that would traverse the road will not exceed the standard of paragraph (b) of this section ;

(d) Any construction or alteration on any of the following :

(1) aerodrome, heliport or landing facility ;

(2) An aerodrome under construction that is subject of a notice or proposal on file with the Authority.

(e) Aerodrome operators shall monitor and report to the Authority any erection of high rise man-made structures outside the boundary of their aerodromes to ensure the safety of airspace for aircraft operations.

12.1.7.1.3. AVIATION HEIGHT CLEARANCE

12.1.7.1.3.1. No person or organization shall put up a structure (permanent or temporary) within the navigable airspace of Nigeria unless such a person or organization is a holder of Aviation Height Clearance Certificate granted under this Regulation.

Requirement
for
Construction/
Erection of
High-rise
Structure.

12.1.7.1.3.2.—(1) Initiation of studies.

The Authority shall conduct an aeronautical study when :

Process for
construction/
erection of
high rise
structure.

(a) Requested by the sponsor of any proposed construction or alteration for which an application is submitted ; or

B 2060

- (b) The Authority determines a study is necessary ;
- (c) The initiation serves as the basis for :
 - (i) Evaluating the effect of the construction or alteration on operating procedures ;
 - (ii) Determining the potential hazardous effect of the proposed construction on air navigation ;
 - (iii) Identifying mitigating measures to enhance safe air navigation ;
 - (iv) Charting of new objects.
- (2) *Requirements for AHC Certificate.*

A person or organisation proposing the construction of a structure or alterations to existing structure shall make a request in writing to the Authority.

The applicant shall pay the Authority's approved fee.

The application letter shall contain the following information for "Off-Aerodrome" proposal:

- (a) Owner of the proposed structure.
- (b) Address of the proposed structure.
- (c) Geographical Coordinates (WGS 84) of the site.
- (d) Elevation (above mean sea level) of the site.
- (e) Proposed height of the structure including antennas or other appurtenances.

The application letter shall contain the following supplemental information for "On-Aerodrome" proposal :

- (a) Drawing (preferably scaled) showing location of the object in relation to nearest active runways ;
- (b) Perpendicular distance of the proposed structure to the nearest active runway centerline ;
- (c) Distance along centerline (actual or extended) from runway end to the perpendicular intercepts point ;
- (d) Ground elevation at the site of the proposed structure ;
- (e) Geographical Coordinates (WGS 84) of the site ;
- (f) Proposed height of the structure including antennas or other appurtenances ;
- (g) Sketches, drawings, etc showing the type of construction or alteration being proposed.

(3) *Permanent and Temporary Obstructions*

Aerodrome owners and operators shall ensure that all structures whether permanent or temporary in nature are evaluated by the Authority prior to commencement of work.

Listed below are some typical examples of permanent and temporary structures. These lists shall not be construed as all inclusive of such objects that require AHC :

(a) *Permanent Construction or Alteration :*

Tower, Mast, Prominent Building, Elevated Signs, Fences, Light Fixtures, Navaid Facilities, National Weather Service Facilities, Power and Cable Lines or Catenaries, Wind Turbine, Chimney, Gas Flare Stacks, Storage Tanks (water or fuel) and similar solid structures.

(b) *Temporary Construction or Alteration :*

Construction Equipment, Moored Balloon and Kites, Cranes, Drilling Rigs, Stock Piles, Staging Areas, Trucks and Temporary Lights poles.

(4) *Evaluating Aeronautical Effect*

(a) The Authority may conduct an aeronautical study to determine the impact of a proposed structure, an existing structure that has not yet been studied by the Authority, or an alteration of an existing structure on aeronautical operations, procedures, and the safety of flight. These studies shall include evaluating :

(i) The impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules ;

(ii) The impact on arrival, departure, and en route procedures for aircraft operating under instrument flight rules ;

(iii) The impact on existing and planned public use aerodromes ;

(iv) Aerodrome traffic capacity of existing public use aerodromes and public use aerodrome development plans received before the issuance of the final determination ;

(v) Minimum obstacle clearance altitudes, minimum instrument flight rules altitudes, approved or planned instrument approach procedures, and departure procedures ;

(vi) The potential effect on ATC radar, direction finders, ATC tower line-of-sight visibility, and physical or electromagnetic effects on air navigation, communication facilities, weather observation facilities and other surveillance systems ;

(vii) The aeronautical effects resulting from the cumulative impact of a proposed construction or alteration of a structure when combined with the effects of other existing or proposed structures.

B 2062

NOTE 1 : The Authority encourages the use of antenna farms and the single structure–multiple antenna concepts for telecommunication towers/ masts whenever possible.

NOTE 2 : In considering proposals for establishing antenna farm areas, the Authority considers as far as possible, the revision of aeronautical procedures and operations to accommodate antenna structures that will fulfill broadcasting requirements.

(5) *Site Inspection*

The proposed site(s) shall be assessed by the Authority to verify the accuracy of the information submitted by the applicant and for effective aeronautical studies of the structure(s).

(6) *Determinations.*

(a) The Authority shall issue a determination stating whether the proposed construction or alteration would be a hazard to air navigation, and will advise the applicant(s) and/or known interested person(s).

(b) The Authority shall make determinations based on the aeronautical study findings and will identify the following :

(i) The effects on VFR/IFR aeronautical departure/arrival operations, air traffic procedures, minimum flight altitudes, and existing, planned, or proposed aerodromes of which the Authority has received actual notice prior to issuance of a final determination.

(ii) The extent of the physical and/or electromagnetic effect on the operation of existing or proposed air navigation facilities, communication aids, or surveillance systems.

Refusal to grant AHC.

12.1.7.1.4. The Authority shall not grant AHC to any structure when the aeronautical study concludes that the proposed construction or alteration will exceed an obstruction standard and would have a substantial aeronautical impact.

NOTE : When the aeronautical study concludes that temporary structure will exceed an obstruction standard but would not have a substantial aeronautical impact to air navigation, all relevant conditional provisions - notice requirements, operational hours, marking and lightings as appropriate - to prevent potential problems shall be put in place.

Grant of AHC to erect Structures.

12.1.7.1.5. The Authority shall issue AHC if the results of aeronautical study carried out indicates that the erection of the structure on the proposed site will not constitute hazard to air navigation.

Dismantling.

12.1.7.1.6. The Authority shall use all legal means of ensuring the removal of any structure which are erected or constructed without compliance with the provisions of these Regulations.

B 2063

12.1.7.1.7. The holder of an AHC certificate shall :

Obligations
of AHC
Holder.

(a) Ensure that the height of the structure does not exceed the height for which AHC has been granted ;

(b) Ensure that the structure is appropriately marked and lighted as stipulated in the conditions for granting the AHC ;

(c) Ensure that the painting and warning lights to be used on the approved structures conform to appropriate standards for conspicuity that would better serve aviation safety ;

(d) Ensure proper records of AHC granted to it and the renewal of the AHC, at least 30 days to the expiry dates.

12.1.7.1.8. Alternate sections of aviation orange (or red) and white paints shall be used as they provide maximum visibility of an obstruction by contrast in colour.

Markings
and Lights.

The height of the structure shall determine the number of alternate marking sections and number of light levels as stipulated in Chapter 10 the ASM.

12.1.7.1.9. Markers shall be used to highlight structures when it is impractical to make them conspicuous by painting or when additional conspicuity is necessary for aviation safety.

Markers.

Markers shall be :

(i) displayed in conspicuous positions on or adjacent to the structures so as to retain the general definition of the structure.

(ii) distinctly shaped – spherical or cylindrical – so they are not mistaken for items that are used to convey other information and shall be recognisable in clear air from a distance of at least 4000ft (1.22km) and in all directions from which aircraft are likely to approach.

12.1.7.1.10. The structure surfaces shall be repainted when the colour changes noticeably or its effectiveness is reduced by scaling, oxidation, chipping, or layers of contamination.

Maintenance.

Markers shall be replaced when faded or otherwise deteriorated and obstruction warning lights shall be closely monitored by visual or automatic means to ensure that burnt lights are replaced without delay.

12.1.7.1.11. The AHC shall remain in force for a period of one (1) year when it shall be due for renewal unless suspended or cancelled by the Authority.

Period of
Validity and
Renewal.

12.1.7.1.12. The Authority shall carry out surveillance inspection of existing structures within the Nigerian Airspace – on aerodrome or off aerodrome - to ascertain the compliance level of the structures with safety measures in terms of painting, markers, lightings and approved heights for the structures.

Surveillance
Inspection of
Structures in
Nigerian
Airspace.

B 2064

Suspension
or
Cancellation.

12.1.7.1.13. The Authority shall suspend or cancel aviation height clearance certificate if there is a variation in the approved height of structure without notification to the Authority or the holder of the AHC fails to carry out appropriate maintenance regarding the painting, markers and warning lights on the structure.

The holder of a suspended or cancelled AHC shall ensure that the anomalies that caused the suspension or cancellation are addressed within 21-days or have the structure dismantled.

Change of
ownership.

12.1.7.1.14. The holder of AHC shall notify the Authority whenever there is a change in ownership of a structure.

12.1.7.2. An aeronautical study shall be conducted by the Authority of any construction or alteration for which a notice is submitted under paragraphs (a) — (d) of section 12.1.7.1.2 to determine the effect of the proposal upon the operation of air navigation facilities and the safe and efficient use of the navigable airspace.

12.1.7.3. The study may include the physical and electromagnetic radiation effect the proposal may have on the operation of air navigation facility.

Register of
Aerodromes
and
Aerodromes
Certificates.

12.1.8.1.—(a) The Authority shall maintain a register of all aerodrome certificates issued under these Regulations.

(b) The Authority shall also maintain a register of all aerodromes situate in Nigeria whether certified or not.

12.1.8.2. The registers shall contain the following particulars—

- (a) the full name, and if any, the trade name of the holder of the certificate ;
- (b) the postal address of the holder of the certificate or owner of the aerodrome ;
- (c) the name and the location of the aerodrome ;
- (d) the number of the certificate issued (for certified aerodrome) ;
- (e) file reference number of the initial and each subsequent safety inspection record and audit report in respect of each aerodrome certified ;
- (f) the nationality of the holder of the certificate or owner of the aerodrome.

12.1.8.3. The particulars referred to in section 12.1.8.2 will be recorded in the register within seven (7) days from the date on which the certificate was issued by the Authority.

12.1.8.4. The register shall be kept in a safe place at the office of the Director General.

12.1.8.5. Persons who intend to access the register for the purpose of obtaining information shall apply in writing to the Authority and shall pay the appropriate search fees as may be prescribed by the Authority.

12.2.—(a) The Authority may exempt, in writing, an aerodrome operator from complying with specific provisions of these Regulations ; Exemptions.

(b) The exemption process shall be in accordance with Part 1.4 ;

(c) An exemption is subject to the aerodrome operator complying with the conditions and procedures specified by the Authority in the Aerodrome Certificate as being necessary in the interest of safety ;

(d) When an aerodrome does not meet the requirement of a standard or practice specified in the Aerodrome Standards Manual, these Regulations and other relevant advisory documents, the Authority may determine, after evaluating the aeronautical studies conducted by the Aerodrome Operator, the conditions and procedures that are necessary to ensure a level of safety equivalent to that established by the relevant Regulations ;

(e) Deviation from these Regulations and the conditions and procedures referred to in section 12.3.11. shall be set out in an endorsement on the Aerodrome Certificate and published in the AIP.

12.3. The five phases for aerodrome certificate approval are :

Aerodrome
Certification.

(i) expression of interest by an intending applicant for an aerodrome certificate ;

(ii) assessment of the formal application including evaluation of Aerodrome Manual ;

(iii) assessment of the aerodrome facilities and equipment ;

(iv) issuance or refusal of an aerodrome certificate ; and

(v) Publication of the certified status of an aerodrome and the required details in the AIP.

NOTE : Details of the certification process is contained in the advisory circular, NCAA-AC-ARD002, on certification of aerodrome.

12.3.1. All Aerodromes in Nigeria used for international and domestic operations shall be certified in accordance with these Regulations.

Requirement
for an
Aerodrome
Certificate.

(a) The operator of an aerodrome designated for public use shall be in possession of an aerodrome certificate.

(b) An aerodrome certificate is required if :

(i) the maximum take-off mass of the aircraft exceeds 2 730 kg ; or

(ii) the aerodrome is designated for night operations.

B 2066

(c) The operator of an aerodrome for which an aerodrome certificate is not required may nevertheless apply for an aerodrome certificate, for which a fee may be charged.

Application
for an
Aerodrome
Certificate.

12.3.2. The applicant shall submit the following to the Authority for acceptance/approval :

(a) An application for the issuance of an Aerodrome Certificate made to the Authority in the form and manner prescribed by the Authority. The application shall include :

(i) the Aerodrome manual and Statement of Compliance demonstrating that the aerodrome operator's Aerodrome Manual is in compliance with the relevant provisions of the Aerodrome Standards Manual ;

(ii) the plans of the Aerodrome as specified in IS 12.4.2(2) including obstacle chart 'A' showing details of obstacles, obstruction marked/lighted ;

(iii) security clearance from the Federal Government ;

(iv) written approval from the town planning authority ;

(v) Environmental Impact Assessment approval from the Ministry of Environment ;

(vi) the proof of payment of appropriate fee as prescribed by the Authority ;

(vii) adequate insurance cover ;

(viii) particulars of non-compliance with, or deviations from the standards prescribed in Nig. CARs Part 12 and/or Aerodrome Standards Manual (ASM).

Grant of an
Aerodrome
Certificate.

12.3.3.—(a) Subject to the provisions in sections 12.3.3 (b) and 12.3.4, the Authority may approve the application and accept/approve the aerodrome manual submitted under section 12.3.2 and grant an aerodrome certificate to the applicant.

(b) Before granting an aerodrome certificate, the Authority shall be satisfied that :

(i) the applicant and his or her staff have the necessary competence and experience to operate and maintain the aerodrome properly ;

(ii) the aerodrome manual prepared for the applicant's aerodrome accurately describes the facilities, services and equipment at the aerodrome ;

(iii) the aerodrome facilities, services and equipment mentioned in (ii) conforms with the standards specified in the Aerodrome Standards Manual and these Regulations ;

(iv) the aerodrome operating procedures make satisfactory provision for the safety of aircraft ; and

(v) an acceptable safety management system is in place at the aerodrome.

12.3.4. If the Authority refuses to grant an Aerodrome Certificate to an applicant, the Authority shall give the applicant a written notice stating the reasons for the refusal, not later than 14 days after the date of refusal.

Refusal to grant an Aerodrome Certificate.

12.3.5. An Aerodrome Certificate remains in force for a period of three (3) years, unless it is suspended or revoked by the Authority.

Duration of an Aerodrome Certificate.

12.3.6. An aerodrome operator shall ensure that renewal of his or her Aerodrome Certificate is commenced not less than 90 days to the date of expiration of his or her certificate.

Renewal of an Aerodrome Certificate.

12.3.7.—(a) The Authority shall, by written notice to the holder of an aerodrome certificate ; suspend an aerodrome certificate if :

Suspension of an Aerodrome Certificate by the Authority.

- (1) a condition to which the certificate is subject has been breached ; or
- (2) the aerodrome facilities, operations or maintenance are not of the standard required in the interests of the safety of air navigation ; or
- (3) the aerodrome operator's safety management system is found to be inadequate ;
- (4) it is in the interest of operational safety ;
- (5) all other means for timely correction of the unsafe condition or ensuring safe aircraft operations have not yielded the required results ;
- (6) the technical proficiency or qualifications of the aerodrome operator to perform the duties to meet the critical safety requirements in accordance with the regulations are found inadequate ;
- (7) the operator resists or is unwilling to take action to correct or mitigate the condition affecting aviation safety ; or
- (8) the operator willfully fails to perform an already agreed upon corrective action and suspension of the certificate is the last resort to avoid unsafe operations in the aerodrome movement area ;

(b) Before suspending an Aerodrome Certificate, the Authority shall give to the holder a “show cause notice” that :

- (1) sets out the facts and circumstances that, in the opinion of the Authority, would justify the suspension ; and
- (2) invite the holder to show cause, in writing within 14 days after the date of the notice, why the certificate should not be suspended.

(c) The Authority shall take into account any written submission that the holder makes to the Authority within the time allowed.

B 2068

Revocation of an Aerodrome Certificate by the Authority.

12.3.8.—(a) The Authority shall, by written notice given to the holder of an aerodrome certificate, revoke an aerodrome certificate if :

- (1) the aerodrome operator is incapable or unwilling to carry out corrective action or has committed or repeated serious violations ;
- (2) the aerodrome operator has demonstrated a lack of responsibility, such as deliberate and flagrant acts of non-compliance or falsification of records jeopardizing aviation safety ; or
- (3) the aerodrome operator has made it convincingly clear that the continued operation of the aerodrome will be detrimental to the public interest ;

(b) Before revoking an Aerodrome Certificate, the Authority shall give to the holder a “show cause notice” that :

- (1) sets out the facts and circumstances that, in the opinion of the Authority, would justify the revocation ;
- (2) invites the holder to show cause, in writing, within 14 days after the date of the notice, why the certificate should not be revoked ; and
- (3) Notwithstanding the provisions of paragraph 12.3.8(b)(2), if the Authority finds that immediate revocation is required for the safety of air transportation, the Authority may revoke the Aerodrome Certificate, without stay on the date stipulated by the Authority.

(c) The Authority shall take into account any written submission that the holder makes to the Authority within the time allowed.

Transfer of an Aerodrome Certificate.

12.3.9.—(a) The Authority may approve the transfer of an Aerodrome Certificate when :

- (1) the current holder of the Aerodrome Certificate notifies the Authority in writing, at least 90 days before ceasing to operate the Aerodrome ;
- (2) the current holder of the Aerodrome Certificate notifies the Authority in writing, of the name of the transferee ;
- (3) the transferee applies to the Authority in writing, within 90 days before the current holder of the Aerodrome Certificate ceases to operate the aerodrome ; and
- (4) the requirements set out in section 12.3.3 (b) are met by the transferee.

(b) If the Authority does not consent to the transfer of an Aerodrome Certificate, it shall notify the transferee in writing, of its reasons not later than 30 days after making that decision.

Voluntary Surrender of an Aerodrome Certificate.

12.3.10.—(a) The holder of an Aerodrome Certificate shall give the Authority not less than 30 days written notice of the date on which the certificate is to be surrendered in order that suitable action can be taken.

(b) The Authority shall cancel the certificate on the date specified in the notice.

12.3.11.—(a) The Authority, when granting the Aerodrome Certificate shall endorse the Conditions for the type and use of the aerodrome and other details in the Aerodrome Certificate ;

Endorsement of Conditions of an Aerodrome Certificate.

(b) The general and specific conditions to be endorsed on the aerodrome certificate are as contained in the Aerodrome Standards Manual.

12.3.12. Provided that the requirements of subsection 12.3.3(b) have been met, the Authority shall amend an Aerodrome Certificate when :

Amendment of an Aerodrome Certificate.

- (a) there is a change in the ownership or management of the aerodrome ;
- (b) there is a change in the use or operation of the aerodrome ;
- (c) there is a change in the boundaries of the aerodromes ; or
- (d) the holder of the Aerodrome Certificate requests amendment.

12.3.13.—(a) The Authority shall issue an Interim Aerodrome Certificate to the applicant referred to in section 12.3.2 or the proposed transferee of an Aerodrome Certificate referred to in section 12.3.9 authorising the applicant or transferee to operate an Aerodrome if the Authority is satisfied that :

Interim Aerodrome Certificate.

(1) an Aerodrome Certificate in respect of the aerodrome shall be issued to the applicant or transferred to the transferee as soon as the application procedure for the grant or transfer of an Aerodrome Certificate has been completed ; and

(2) the grant of the Interim Certificate is in the public interest and is not detrimental to aviation safety.

(b) An Interim Aerodrome Certificate issued pursuant to section 12.3.13(a) shall expire on ;

- (1) the date on which the Aerodrome Certificate is issued or transferred, or
 - (2) the expiry date specified in the interim Aerodrome Certificate ;
- Whichever is earlier.

(c) These regulations apply to an Interim Aerodrome Certificate in the same manner as they apply to an Aerodrome Certificate.

12.4. AERODROME MANUAL

12.4.1.—(a) The operator of a certified aerodrome shall have a manual to be known as the Aerodrome Manual for the aerodrome.

Preparation of the Aerodrome Manual.

(b) The Aerodrome Manual shall :

- (1) be typewritten or printed, and signed by the aerodrome operator ;
- (2) be in a format that is easy to revise ;
- (3) have a system for recording the accuracy of pages or amendments thereto, including a page for logging revisions ; and

B 2070

(4) be organised in a manner that will facilitate the preparation, review and acceptance or approval process.

Information to be included in the Aerodrome Manual.

12.4.2. The operator of the aerodrome shall include the following particulars in an aerodrome manual as provided in IS 12.4.2, to the extent that they are applicable to the aerodrome, under the following parts :

PART 1. General information set out in Part 1 of the IS 12.4.2 on the purpose and scope of the aerodrome manual ; the legal requirement for an aerodrome certificate and an aerodrome manual as prescribed in the national regulations ; conditions for use of the aerodrome ; the aeronautical information services available and the procedures for their promulgation ; the system for recording aircraft movements and the obligations of the aerodrome operator ;

PART 2. Particulars of the aerodrome site as set out in Part 2 of the IS 12.4.2 of these regulations ;

PART 3. Particulars of the aerodrome required to be reported to the aeronautical information service as set out in Part 3 of the IS 12.4.2 of these regulations ;

PART 4. The aerodrome operating procedures and safety measures as set out in Part 4 of the IS 12.4.2 of these regulations. These shall include references to air traffic procedures such as those relevant to low visibility operations. Air traffic management procedures are normally published in the air traffic services manual with a cross-reference to the aerodrome manual ;

PART 5. Details of the aerodrome administration and the safety management system as set out in Part 5 of the IS 12.4.2 of these regulations.

Location of the Aerodrome Manual.

12.4.3.—(a) The aerodrome operator shall provide the Authority with a complete and current copy of the Aerodrome Manual ;

(b) The aerodrome operator shall keep at least one complete and current copy of the Aerodrome Manual at the aerodrome and one copy at the operator's principal place of business if other than the aerodrome ;

(c) The aerodrome operator shall make a copy of the Aerodrome Manual available for inspection by authorised officers of the Authority.

Amendment of the Aerodrome Manual.

12.4.4.—(a) To maintain the accuracy of the Aerodrome Manual, the Authority shall issue a written directive to an aerodrome operator requiring the operator to alter or amend the manual in accordance with that directive ;

(b) The aerodrome operator shall alter or amend the Aerodrome Manual, whenever necessary, in order to maintain the accuracy of the information in the manual ;

(c) The aerodrome operator shall submit in writing a proposed amendment to its Aerodrome Manual to the Authority at least 30 days before the proposed

effective date of the amendment or alteration, unless a shorter filing period is allowed by the Authority ;

(d) In the case of amendments initiated by the Authority, the Authority shall notify the operator of the certified aerodrome of the proposed amendment, in writing, fixing a reasonable period within which the operator may submit written information, views, and arguments on the amendment. After considering all relevant materials presented, the Authority shall notify the operator within 30 days of any amendment adopted, or rescind the notice. The amendment becomes effective not less than 30 days after the operator receives notice of it ;

(e) Notwithstanding the provisions of paragraph (d) of this section, if the Authority finds there is an emergency requiring immediate action with respect to the safety of air transportation, the Authority shall issue amendment, effective without stay on the date the operator receive notice of it. In such a case, the Authority shall incorporate the findings of the emergency and a brief statement of the reason for the findings in the notice of the amendment.

12.4.5. The Authority shall approve the Aerodrome Manual and any amendments thereto, provided they meet the requirement of this part.

The Authority's approval of the Aerodrome Manual.

12.4.6. The aerodrome operator shall appoint a person to be the Aerodrome Manual Controller, whose functions shall include :

Aerodrome Manual Controller.

(a) keeping a record of persons who hold copies of the whole or part of the Aerodrome Manual ;

(b) updating of information in the manual given to those holders referred to in (a).

12.5.—(a) An applicant for or a holder of an Aerodrome Certificate shall provide the Authority with the following in the aerodrome manual :

Aerodrome Design Requirements.

- (1) physical characteristics ;
- (2) obstacle limitation surface ;
- (3) visual aids for navigation, denoting obstacle and the restricted use areas ;
- (4) Aerodrome equipment and installation ;
- (5) Electrical systems and aerodrome maintenance ;
- (6) an airspace classification appropriate to the characteristics of the aircraft it intends to serve, the lowest meteorological minima for each runway, and the ambient light conditions expected during the operation of aircraft ;

B 2072

(b) The physical characteristics, obstacle limitation surfaces, visual aids, equipment and installation, electrical systems mentioned above in (1), (2), (3),(4) and (5) shall comply with the aerodrome design standards highlighted in Chapters 7, 8, 9, 10, 11,12, and 13 of the Aerodrome Standards Manual.

(c) The airfield lighting electrical system at an aerodrome shall be designed in such a way as to ensure that every approach, runway and taxiway lighting systems shall be interleaved up to at least two series circuits to ensure visual guidance in the event of power failure on any of the circuits.

12.6. OBLIGATIONS OF THE AERODROME OPERATOR

General.

12.6.1. The grant of an Aerodrome Certificate obliges the aerodrome operator to ensure the safety, regularity and efficiency of operations at the aerodrome, to allow authorised officers of the Authority access to the aerodrome to carry out safety audits, inspections and testing and to be responsible for notifying and reporting to the Authority as prescribed in these Regulations.

Compliance with Standards and Practices.

12.6.2. The aerodrome operator shall comply with the standards specified in the Aerodrome Standards Manual and with any conditions endorsed in the Aerodrome Certificate.

Competence of Operational and Maintenance Personnel.

12.6.3. The aerodrome operator shall employ adequate numbers of qualified and skilled personnel to perform all critical activities for aerodrome operation and maintenance.

12.6.3.1. The operator shall train all personnel who access movement and safety areas and perform duties in compliance with the Requirements of this Regulation. This training shall be completed prior to the initial performance of such duties for all personnel. Thereafter, all personnel shall be retrained at least once every 3 years. The curriculum for initial and recurrent training shall include at least the following areas :

(a) Aerodrome familiarisation, including aerodrome marking, lighting, and signs system ;

(b) Procedures for access to, and operation in, movement areas and safety areas ;

(c) Aerodrome communications, including radio communication between the air traffic control tower and personnel, use of the common traffic advisory frequency if there is no air traffic control tower or the tower is not in operation, and procedures for reporting unsafe aerodrome conditions ;

(d) Duties required under the Aerodrome Operations Manual and the requirements of this regulation ;

(e) Any additional subject areas required under sections 12.6.16, 12.6.18, 12.6.20 and 12.6.23 as appropriate ;

(f) In respect of aerodrome maintenance, the training of personnel shall include the following areas as appropriate :

- (1) Maintenance of runway, taxiway and apron (paved and unpaved) ;
- (2) Runway and taxiway strips and shoulders and runway end safety areas ;
- (3) Aerodrome drainage and fencing ;
- (4) Aerodrome Visual aids and electrical systems ;
- (5) Passenger and Cargo building facilities.

(g) Make a record of all training completed by each individual in compliance with this section that includes, at a minimum, a description and date of training received and provide the Authority with a copy of this record, if requested ;

(h) As appropriate, comply with the following training requirements :

- (1) Aircraft Rescue and Fire Fighting operational requirements ;
- (2) Ground Vehicles and Pedestrians ;
- (3) Aerodrome Inspection programme ;
- (4) Wildlife Hazard management.

(i) Notwithstanding the requirements of 12.6.3.1 , the aerodrome operator shall develop and implement a training program for personnel engaged prior to 30th March, 2012 that will demonstrate compliance with this regulation.

12.6.3.2. The aerodrome operator shall implement a programme to upgrade the competency of the personnel referred to in section 12.6.3.1.

12.6.3.3. The aerodrome operator shall submit to the Authority for approval a training programme for operational and maintenance personnel.

12.6.4.—(a) The aerodrome operator shall develop a maintenance programme for all aerodrome facilities, equipment and installations power generating plants, sewage, water works at the aerodrome to ensure serviceability.

Aerodrome
Operations
and
Maintenance.

(b) Subject to any directives that the Authority shall issue, the aerodrome operator shall operate and maintain the aerodrome in accordance with the procedures set out in the Aerodrome Manual ;

(c) To ensure the safety of aircraft, the Authority shall give written directives to an aerodrome operator to alter the procedures set out in the Aerodrome Manual ;

(d) To ensure the safety and maintenance of the aerodrome facilities, the aerodrome operator shall :

B 2074

(i) provide and maintain navigational visual aids which includes: wind direction indicators, Airfield Lightings, Markings, Markers and Signs on the runway as prescribed in the Aerodrome Standards Manual.

(ii) provide and maintain runway surfaces including but not limited to surfacing and resurfacing, frictional coefficients, aqua planning, pavement bearing strength values of the runway.

(iii) submit/implement a corrective action plan for mitigating the safety concerns at an aerodrome.

(e) An aerodrome operator shall notify the ATC that a runway or portion thereof may be slippery when wet. A runway or portion thereof shall be determined as being slippery when wet, when the friction measurements show that the runway surface friction characteristics as measured by a continuous friction measuring device are below the minimum friction level specified in Table 14-1 of the Aerodrome Standards Manual.

(f) The Aerodrome operator shall coordinate with the ATS provider in order to be satisfied that appropriate air traffic services are available to ensure the safety of aircraft in the airspace associated with the aerodrome. The coordination shall cover other areas related to safety such as aeronautical information services, air traffic services, designated meteorological authorities and security.

(g) The Aerodrome operator shall ensure that any person accessing the airside, whether for work or inspection purposes, shall wear a yellow reflective jacket except orange reflective jacket for marshallers.

Aerodrome Operator's Safety Management System.

12.6.5.—(a) The aerodrome operator shall implement a safety management system acceptable to the Authority as prescribed in Nig.CARs Part 20 ;

(b) The aerodrome operator shall require all users of the aerodrome, including fixed-base operators, ground handling agencies and other organizations that perform activities independently at the aerodrome in relation to flight or aircraft handling, to comply with the requirements laid down by the aerodrome operator with regard to safety at the aerodrome. The aerodrome operator shall monitor such compliance ;

(c) The aerodrome operator may also arrange for an external audit and inspection programme for evaluating other users, including fixed-based operators, ground handling agencies and other organisations working at the Aerodrome.

Crew briefing.

12.6.6. The aerodrome operator shall provide suitable and easily accessible space to be used for the purpose of crew briefing at the aerodrome.

Access to the Aerodrome by Authorised Inspectors.

12.6.7.—(a) Personnel so authorised by the Authority shall inspect and carry out tests on the aerodrome facilities, services and equipment, inspect the aerodrome operator's documents and records and verify the aerodrome operator's safety management system before the Aerodrome Certificate is

granted or renewed and, subsequently, at any other time, for the purpose of ensuring safety at the aerodrome ;

(b) The Authority shall carry out periodic inspections and audits on aerodrome facilities, services and equipment in order to meet its continuing surveillance obligation and ensure safety of aerodrome operations ;

(c) An aerodrome operator shall, at the request of the person referred to in paragraph (a) above allow access to any part of the aerodrome or any aerodrome facility, including equipment, records, documents and operational personnel, for the purpose referred to in paragraph (a) above ;

(d) The aerodrome operator shall cooperate with personnel so authorized by the Authority in conducting the activities referred to in paragraph (a) above.

12.6.8. An aerodrome operator shall remove from the aerodrome surface any vehicle or other obstruction that is likely to be hazardous.

Removal of obstructions from the Aerodrome Surface.

12.6.9. When low flying aircraft, at or near aerodrome or taxiing aircraft are likely to be hazardous to people or vehicular traffic, the aerodrome operator shall :

Warning Notices.

(a) post hazard warning notices on any public way that is adjacent to the manoeuvring area ; or

(b) if such a public way is not controlled by the aerodrome operator, inform the appropriate body responsible for posting the notices on the public way that there is a hazard.

12.6.10. The Aerodrome operator shall establish and retain personnel training records as prescribed under section 12.6.3.1 (g) and safety inspection records as prescribed in the Aerodrome Standards Manual (Appendix G).

Retention of records.

12.6.11. The Aerodrome operator, in determining and reporting Aerodrome data shall :

Aerodrome Data.

(a) Ensure adherence to accuracy, integrity and protection requirements set forth in Chapter 6, Section 6.2.1 of the Aerodrome Standards Manual ;

(b) Maintain the integrity of aeronautical data and avoid the corruption of data at all times ;

(c) Ensure that data are measured or described appropriately as prescribed in Chapter 6, Section 6.2.1 of the Aerodrome Standards Manual.

12.6.12.—(a) Notification of inaccuracies in Aeronautical Information Service (AIS) Publications-An Aerodrome Operator shall review all Aeronautical Information Publications (AIPs), AIP Supplements, AIP Amendments, Notices to Airmen (NOTAMs), Pre-flight Information Bulletins and Aeronautical Information Circulars issued by the AIS on receipt thereof

Notifying and reporting.

B 2076

and immediately after such reviews shall notify the Authority of any inaccurate information contained therein that pertains to the Aerodrome ;

(b) Notification of changes to the Aerodrome facilities, equipment and level of service planned in advance—An Aerodrome operator shall notify the Authority, in writing, at least 72 days before effecting any change to the aerodrome facility or equipment or the level of service at the Aerodrome that has been planned in advance and which is likely to affect the accuracy of the information contained in any AIS publication referred to in section 12.6.12(a) ;

(c) Issues requiring immediate notification—Subject to section 12.6.12(d), an Aerodrome operator shall arrange for the Air Traffic Control and the Authority to receive immediate notice detailing any of the following circumstances of which the operator has knowledge :

(1) *Obstacles, Obstructions and Hazards* :

(i) any projections by an object through an obstacle limitation surface relating to the Aerodrome ; and

(ii) the existence of any obstruction or hazardous condition affecting aviation safety at or near the Aerodrome ;

(2) *Level of service*—Reduction in the level of service at the Aerodrome as set out in any of the AIS publications referred to in section 12.6.12(a) above ;

(3) *Movement area*—Closure of any part of the movement area of the Aerodrome ; and

(4) Any other condition that could affect aviation safety at the Aerodrome and against which precautions are warranted.

(d) *Immediate notification to pilots*—When it is not feasible for an Aerodrome operator to arrange for the air traffic control unit and the Authority to receive notice of a circumstance referred to in section, 12.6.12(c) above, the operator shall give immediate notice direct to the pilots who may be affected by that circumstance.

(e) Any person or corporate organisation shall report to the Authority any proposed erection of high rise man-made structures within 15km distance radius from aerodrome reference point to ensure the safety of airspace for aircraft operations.

(f) *Mandatory occurrence report*—An Aerodrome operator shall submit immediately to the Authority, mandatory occurrence report of any of the accident or incident at the aerodrome enumerated in section 5.3.2.2 of the Aerodrome Standards Manual.

12.6.13. The aerodrome operator shall :

Visual Aids
for
Navigation.

(a) establish procedures to ensure that a system of preventive maintenance and checking of the Aerodrome visual aids such as Wind Direction Indicator, Airfield lighting, Markings, Markers and Signs for navigation is in place ;

(b) ensure that each visual aid for navigation provides reliable and accurate guidance to the user ;

(c) establish a percentage of allowable serviceable lights that will ensure continuity of guidance to the user ;

(d) restore any unserviceable or deteriorated items back into service without undue delay ;

(e) provide and maintain visual aids at the Aerodrome as prescribed in chapter 9 and 14.5 of the Aerodrome Standards Manual.

12.6.14. The aerodrome operator shall :

Works on
Aerodrome.

(a) prepare and submit to the Authority for approval a work safety plan before commencement of works to ensure that the works carried out on the Aerodrome do not endanger aircraft operations ;

(b) appoint one or more trained works safety officers to ensure full compliance with the procedures and precautions in paragraph (a) above ;

(c) coordinate work and ensure compliance with safety requirements and standards for routine maintenance, minor or major construction or maintenance works at its Aerodrome, as prescribed in Chapter 5 of the Aerodrome Standards Manual ;

(d) provide liaison between any maintenance team or contractor, ATC and safety works officer so as to ensure compliance with safety rules in the areas of :

(1) R/T procedures to be used ;

(2) Isolation of work areas ;

(3) General working rules ;

(4) Hazards to personnel working on the Aerodrome ;

(5) Marking and Lighting on cranes or equipment that is likely to penetrate the obstacle clearance zone ;

(6) Effect on navigational aids and other electronic landing aids ;

(7) Paved area cleanliness after work ;

(e) Carry out works on Aerodrome as prescribed in Chapter 5, section 5.1 of the Aerodrome Standards Manual.

B 2078

12.6.15. AERODROME EMERGENCY PLAN

General.

12.6.15.1.—(a) After consultation with representatives of the air operators that use the aerodrome and with community organisations that may be of assistance during emergency operations at the aerodrome or in its vicinity, the aerodrome operator shall develop and maintain an emergency plan for the purpose of identifying :

(1) the emergencies that can reasonably be expected to occur at the aerodrome or in its vicinity and that could be a threat to the safety of persons or to the operation of the aerodrome ;

(2) the measure to activate the emergency plan for each type of emergency ;

(3) the community organisations capable of providing assistance in an emergency ; and

(4) any additional resources available at the aerodrome and in the surrounding area.

(b) The aerodrome operator shall establish a degree of supervision and control sufficient to manage the size and complexity of an emergency.

(c) The aerodrome operator shall maintain at the aerodrome, in the format of a manual, a copy of an updated version of the emergency plan ; and provide a copy to the Authority on request.

(d) The aerodrome operator shall :

(1) update the emergency plan as necessary to ensure its effectiveness in emergency operations ; and

(2) review the plan and make any required updates at least once a year after consultation with a representative sample of the air operators that use the aerodrome and the community organisations identified in the plan.

Content of
the AEP.

12.6.15.2.—(a) In an emergency plan, the aerodrome operator shall, at a minimum :

(1) identify the potential emergencies, including :

(i) an aircraft accident or incident :

(a) within the aerodrome boundaries, and

(b) within a critical rescue and fire-fighting access area that extends 1000m beyond the ends of a runway and 150m at 90° outwards from the centerline of the runway including any part of that area outside the aerodrome boundaries.

(ii) an aircraft emergency declared by either air traffic services or a pilot,

- (iii) a fuel spill that spreads at least 1.5m in any direction or exceeds 12mm in depth,
 - (iv) a medical emergency,
 - (v) a fire in which aerodrome operations or passenger safety is threatened,
 - (vi) an emergency that is related to a special aviation event and that might have an impact on aerodrome operations,
 - (vii) a natural disaster, and
 - (viii) any other emergency that is a threat or is likely to be a threat to the safety of persons or to the operation of the aerodrome ;
- (2) identify the organisations at the aerodrome and the community organisations that are capable of providing assistance during an emergency at an aerodrome or in its vicinity, provide the telephone numbers and other contact information for each organisation and describe the type of assistance each can provide ;
- (3) identify the other resources available at the aerodrome and in the surrounding communities for use during emergency response or recovery operations and provide their telephone numbers and other contact information ;
- (4) describe for emergency situations, the lines of authority and the relationships between the organisations identified in the emergency plan and describe how actions will be coordinated among all and within each of the organisations ;
- (5) identify for emergency situations, the supervisors and describe the responsibilities of each ;
- (6) specify the positions occupied by the aerodrome personnel who will respond to an emergency and describe the specific emergency response duties of each ;
- (7) identify the on-scene commander and describe the commander's emergency response duties ;
- (8) provide Authorisation for a person to act as an on-scene commander or a supervisor if they are not aerodrome personnel ;
- (9) set out the criteria to be used for positioning the on-scene commander within visual range of an emergency scene ;
- (10) set out the measures to be taken to make the on-scene commander easily identifiable at all times by all persons responding to an emergency ;
- (11) if initial on-scene control has been assumed by a person from a responding organisation, describe the procedure for transferring control to the on-scene commander ;
- (12) describe any training and qualifications required for the on-scene commander and the aerodrome personnel identified in the emergency plan ;

B 2080

(13) describe the method for recording any training provided to the on-scene commander and aerodrome personnel ;

(14) describe the communication procedures and specify the radio frequencies to be used to link the operator of the aerodrome with :

(i) the on-scene commander, and

(ii) the providers of ground traffic control services (if applicable) and air traffic control services or any other flight information unit at the aerodrome ;

(15) describe the communication procedures allowing the on-scene commander to communicate with the organisations identified in the emergency plan ;

(16) identify the alerting procedures that :

(i) activate the emergency plan,

(ii) establish the necessary level of response,

(iii) allow immediate communication with the organisations identified in the emergency plan in accordance with the required level of response,

(iv) if applicable, confirm the dispatch of each responding organisation ;

(v) establish the use of standard terminology in communications, and

(vi) establish the use of the appropriate radio frequencies as set out in the emergency plan ;

(17) specify :

(i) the aerodrome communication equipment testing procedures,

(ii) a schedule for the testing, and

(iii) the method of keeping records of the tests ;

(18) specify the location of the emergency coordination centre used to provide support to the on-scene commander ;

(19) describe the measures for dealing with adverse climatic conditions and darkness for each potential emergency set out in paragraph (a)(1) ;

(20) describe the procedures to assist persons who have been evacuated if their safety is threatened or airside operations are affected ;

(21) describe the procedures respecting the review and confirmation of the following to permit the return of the aerodrome to operational status after an emergency situation :

(i) emergency status reports,

(ii) co-ordination with appropriate judicial authorities and the investigator designated by the accident investigation entity regarding the accident site conditions,

- (iii) disabled aircraft removal,
- (iv) airside inspection results,
- (v) accident or incident site conditions, and
- (vi) air traffic services and NOTAM coordination ;

(22) describe the procedures for controlling vehicular flow during an emergency to ensure the safety of vehicles, aircraft and persons ;

(23) specify the procedures for issuing a NOTAM in the event of an emergency affecting the critical category for firefighting required under section 12.6.16 of these Regulations, or changes or restrictions in facilities or services at the aerodrome during and after an emergency ;

(24) describe the procedures for preserving evidences as it relates to :

- (i) aircraft or aircraft part removal, and
- (ii) the site of the accident or incident ;

(25) describe the procedures to be followed, after any exercise set out in section 12.6.15.6 or the activation of the plan for an emergency that requires a full emergency standby, in the following cases :

- (i) a post-emergency debriefing session with all participating organisations,
- (ii) the recording of the minutes of the debriefing session,
- (iii) an evaluation of the effectiveness of the emergency plan to identify deficiencies,
- (iv) changes, if any, to be made in the emergency plan, and
- (v) partial testing subsequent to the modification of an emergency plan ;

(26) describe :

- (i) the process for an annual review and update of the emergency plan, and
- (ii) the administrative procedure for the distribution of copies of an updated version of the emergency plan to the aerodrome personnel who require them and to the community organisations identified in the plan ; and
- (iii) the procedures to assist in locating an aircraft when the aerodrome receives notification that an Emergency Locator Transmitter (ELT) or any advanced system of tracking aircraft in an emergency has been activated.

(b) The aerodrome operator shall include a copy of the following documents in the emergency plan :

- (1) the signed agreements, if any, between the aerodrome operator and the community organisations that provide emergency response services to the aerodrome ; and
- (2) an aerodrome grid map.

B 2082

Emergency
Operations
Centre and
Command
Post.

12.6.15.3.—(a) A fixed Emergency Operations Centre and a mobile command post shall be available for use during an emergency.

(b) The Emergency Operations Centre shall be a part of the aerodrome facilities and shall be responsible for the overall coordination and general direction of the response to an emergency.

(c) The command post shall be a facility capable of being moved rapidly to the site of an emergency, when required, and shall undertake the local coordination of those agencies responding to the emergency.

(d) A person shall be assigned to assume control of the Emergency Operations Centre and, when appropriate, another person the mobile command post.

On-Scene
Commander.

12.6.15.4.—(a) The on-scene commander shall be at the emergency site and shall not have other duties during an emergency, unless the life of a person is in danger nearby and the on-scene commander is alone and has the ability to assist the person.

(b) The aerodrome operator shall establish procedures that make the on-scene commander easily identifiable by all persons responding to an emergency.

Aircraft
Crash Charts
and
Aerodrome
Grid Maps.

12.6.15.5.—(a) For aircraft operating in a passenger or cargo configuration, the aerodrome operator shall make available to the emergency coordination centre aircraft crash charts specific to the aircraft used by the air operators that use the aerodrome, and shall provide copies of the charts to the organisations responsible for fire-fighting services that are identified in the emergency plan ; and the on-scene commander.

(b) In the case of aircraft that have or may have a seating configuration of not more than nine passenger seats, the aerodrome operator may use, instead of the aircraft crash charts referred to in paragraph (a), other documents containing equivalent information.

(c) The aerodrome operator shall develop and review and update annually, if necessary, an aerodrome grid map that includes a minimum of :

- (1) an area covering at least one kilometer around each runway ;
- (2) the aerodrome access roads and gates ; and
- (3) the location of meeting points to which persons and vehicles that are responding to an emergency situation proceed in order to receive instructions.

(d) The aerodrome operator shall provide copies of the aerodrome grid map to the aerodrome personnel and organisations identified in the aerodrome emergency plan.

12.6.15.6.—(a) The aerodrome operator shall assign specific emergency response duties, other than those of an on-scene commander or a supervisor, only to those aerodrome personnel who are identified in the emergency plan and who :

- (1) are knowledgeable of their duties as described in the plan ; and
- (2) have the skills to carry out their duties.

(b) The aerodrome operator shall assign to act as an on-scene commander or a supervisor only those aerodrome personnel, or other persons authorised by the operator in the emergency plan, who are :

- (1) knowledgeable about the contents of the emergency plan ;
- (2) familiar with the procedures for the overall coordination of emergency operations at an emergency site ; and
- (3) trained for the particular role that they perform.

(c) The aerodrome operator shall :

- (1) keep records of the training that was received by persons to meet the requirements of paragraphs (a) and (b) ;
- (2) preserve the records of training for five years after the day on which the training was received ; and
- (3) submit a copy of the training records to the Authority on request.

12.6.15.7.—(a) The aerodrome operator shall test the emergency plan by conducting a full-scale emergency exercise at intervals not exceeding two years.

(b) The aerodrome operator shall conduct full-scale emergency exercises based on scenarios that relate to a major aircraft accident and, at a minimum, the exercises shall include the assembly and deployment of fire-fighting, policing and medical services organisations.

(c) The aerodrome operator shall conduct a partial emergency exercise each year in which no full-scale emergency exercise is conducted.

(d) The aerodrome operator, when conducting a partial emergency exercise, shall have :

- (1) an up-to-date list of the participants and their telephone numbers and the radio frequencies used to communicate ;
- (2) fully operational communication equipment ; and
- (3) a copy of the aerodrome grid map.

(e) The aerodrome operator shall base the partial emergency exercises on scenarios that include an aircraft accident or incident.

B 2084

(f) The aerodrome operator shall provide the Authority with a notice in writing of the date and time when a partial or full-scale exercise is to be carried out at least 90 days before the day of the exercise.

(g) The Authority shall observe the testing of an emergency plan.

(h) After each exercise, the aerodrome operator shall conduct a debriefing with all the organisations identified in the plan and a representative of the aerodrome personnel who participated to evaluate the effectiveness of the emergency plan and identify deficiencies.

(i) The aerodrome operator shall implement an action plan to correct any deficiencies in the emergency plan that was identified during a debriefing session.

(j) The aerodrome operator shall record :

(1) the date of an exercise ;

(2) the type of exercise ;

(3) the minutes of the debriefing session after the exercise ; and

(4) any action plans to correct deficiencies that were identified during a debriefing session.

(k) The aerodrome operator shall keep an exercise record for 10 years after the day on which the record is made.

(l) The aerodrome operator shall submit debriefing minutes and corrective action plans relating to an exercise to the Authority on request.

Authorisation.

12.6.15.8. The Authority may, on application by the aerodrome operator, provide to the operator written Authorisation not to conduct the full-scale exercise during an interval set out in section 12.6.15.7 paragraph (a) if the operator demonstrates that the testing requirements for a full-scale exercise have been met through an activation of the emergency plan in response to an emergency during that interval.

Rescue and
Fire-Fighting
at
Aerodromes.

12.6.16.1. The aerodrome operator shall provide the aircraft fire-fighting vehicles and the personnel that correspond to the critical category for fire-fighting and published in the Aeronautical Information Publications (AIP) to respond to an aircraft emergency at the aerodrome.

Hours of
Operation of
an Aircraft
Fire-fighting
Service.

12.6.16.2.—(a) the aerodrome operator shall establish the hours of operation of an aircraft fire-fighting service and ensure that those hours coincide with the hours of movements of operating aircraft at the aerodrome; and ensure that the critical category for fire fighting and the hours of operation of an aircraft fire fighting service are published in the Aeronautical Information Publications (AIP) and in a NOTAM, if the NOTAM is published earlier.

(b) The aerodrome operator shall provide an aircraft fire-fighting service until the aircraft operating at the aerodrome has taken off or landed or the flight has been cancelled.

12.6.16.3. An aircraft category for fire-fighting set out in column I of an item of the table below to this subsection shall be established for an aircraft based on the aircraft overall length set out in column II of the item and the aircraft maximum fuselage width set out in column III of that item.

Aircraft Category for Fire Fighting.

TABLE 1

<i>Column I Aircraft Category for Fire Fighting</i>	<i>Column II Aircraft Overall Length</i>	<i>Column III Aircraft Maximum Fuselage Width</i>
1	0 up to but not including 9 m	2 m
2	9 m up to but not including 12 m	2 m
3	12 m up to but not including 18 m	3 m
4	18 m up to but not including 24 m	4 m
5	24 m up to but not including 28 m	4 m
6	28 m up to but not including 39 m	5 m
7	39 m up to but not including 49 m	5 m
8	49 m up to but not including 61 m	7 m
9	61 m up to but not including 76 m	7 m
10	76 m up to but not including 90 m	8 m

Where the fuselage width of an aircraft that has an overall length within the range set out in column II of an item of the table to paragraph (a) is greater than the aircraft maximum fuselage width set out in column III of the item, the aircraft category for fire fighting for the aircraft shall be one category higher than the category set out in column I of that item.

12.6.16.4.—(a) The aerodrome operator shall compile monthly statistics in respect of the number of enplaned and deplaned passengers.

Statistics on the Number of Passengers and Aircraft Movements.

(b) The aerodrome operator shall compile monthly statistics setting out number of movements by operating aircraft in each aircraft category for fire fighting. The aerodrome operator shall, at least once every six months, review the monthly statistics for the twelve months preceding the date of the review and determine the three consecutive months with the highest total number of movements by operating aircraft in all aircraft categories for fire fighting.

(c) Where the review shows more than one period of three consecutive months having the same total number of movements by operating aircraft, the period to be used for the purposes of section 12.6.16.5 of these Regulations is the period involving the highest aircraft category for firefighting or where those

B 2086

periods involve the same highest aircraft category for fire fighting, the period involving the greatest number of movements in that category.

(d) The operator of a designated aerodrome shall retain the monthly statistics referred to in paragraph (a) and (b) for five years after the date of the review; and provide them to the Authority at the Authority's request.

Critical
Category for
Fire Fighting.

12.6.16.5.—(a) The aerodrome operator shall determine a critical category for fire fighting for the aerodrome based on the number of movements at the aerodrome during the three-month period determined in accordance with section 12.6.16.5(c) or (d) by operating aircraft in the highest and the next highest aircraft categories for fire fighting.

(b) Where, during the period referred to in paragraph (a), the number of movements at an aerodrome by aircraft in the highest aircraft category for firefighting is 700 or more, the critical category for firefighting is equivalent to that highest aircraft category for fire fighting.

(c) If, during the period referred to in paragraph (a), the number of movements at an aerodrome by aircraft in the highest aircraft category for firefighting is less than 700, the critical category for firefighting shall be determined by decreasing the highest aircraft category for firefighting by one category.

(d) If the aerodrome operator anticipates a period of one or more hours of movements of aircraft of a lower aircraft category for firefighting only, the operator may reduce the critical category for fire fighting to the highest aircraft category for firefighting anticipated for that period if the operator documents the anticipated situation; and notifies the appropriate air traffic control unit or any other flight information unit of the reduced critical category for fire fighting for publication in a NOTAM.

Extinguishing
Agents and
Aircraft Fire-
fighting
Vehicles.

12.6.16.6. The aerodrome operator shall provide its aircraft fire-fighting service with both the principal and the complementary extinguishing agents and the equipment delivering the agents that meet the requirements detailed in implementing standards and the Aerodrome Standards Manual.

Adjustment
to Higher
Requirements.

12.6.16.7. Where an increase in the number of movements by, or in the size of, operating aircraft at an aerodrome results in the establishment for the aerodrome of a higher critical category for fire-fighting than the previous category, the operator of the aerodrome shall meet the requirements for that higher category as set out in Table 2 within one year after the date of establishing the higher critical category for fire fighting.

Personnel
requirements.

12.6.16.8.—(a) *Minimum Personnel* — During the hours of operation of the aircraft fire-fighting service, the aerodrome operator shall ensure that trained aircraft fire-fighting personnel are available at their assigned post and in sufficient number to operate the aircraft fire-fighting vehicles and apply the extinguishing agents required by section 12.6.16.6.

(b) *Training of Personnel* — The aerodrome operator shall ensure that all personnel assigned to aircraft fire-fighting duties are trained in accordance with appropriate aircraft fire-fighting standards :

(i) The aerodrome operator shall ensure that training of ARFF personnel are conducted at approved Aerodrome Fire-fighting Training Organizations by the Authority.

(ii) The Aerodrome Firefighting Training Organisation shall comply with the training requirements detailed in the Advisory Circular-NCAA-AC-ARD005 “Assessing Competence of ARFF Training Organizations and ARFF Personnel”.

(c) *Equipment and Protective Clothing* — The aerodrome operator shall provide all personnel assigned to aircraft fire-fighting duties with the equipment and protective clothing necessary to perform their duties.

(d) *Fire-fighter Qualifications*

(1) No aerodrome operator shall permit a person to act and no person shall act as an aircraft firefighter at an aerodrome unless the person has, within the previous 12 months, successfully completed the training specified in this section.

(2) The aerodrome operator shall :

(i) maintain, for each aircraft firefighter, a training record containing the information specified in this section.

(ii) preserve the training record for three years after the aircraft firefighter leaves the service of the aerodrome ; and

(iii) at the request of the Authority, provide the Authority with a copy of the training record.

12.6.16.9. The aerodrome operator shall ensure that, during the hours of operation of its aircraft fire-fighting service; of the fire-fighting personnel required to be available, the number of personnel capable of immediate response is sufficient to meet the requirements of the response test referred to in this section 12.6.16.10.

Personnel
Readiness.

12.6.16.10.—(a) The aerodrome operator shall carry out a response test to evaluate the response time and effectiveness of the aircraft fire-fighting service required to be maintained during the hours of operation specified every 12 months ; and at any time at the request of the Authority, where the Authority has reasonable grounds to believe that the aircraft fire-fighting service at the aerodrome does not meet the requirements of this section.

Response
Test.

(b) The aerodrome operator shall give the Authority at least 30 days written notice of the date on which a response test is to be carried out.

B 2088

(c) The aerodrome operator shall provide the Authority with a copy of the results of a response test within 14 days after the date of the test.

(d) A response test at an aerodrome has a satisfactory result if within three minutes after an alarm is sounded, aircraft fire-fighting vehicles in a number sufficient for applying the principal extinguishing agent at 50 per cent of the total discharge capacity required are dispatched from their assigned position and, under optimum surface and visibility conditions at the aerodrome, reach any point of each operational runway, or another predetermined point of comparable distance and terrain.

(e) The aerodrome operator shall record the results of a response test and shall preserve the records for two years after the date of the test.

(f) If a response test does not have a satisfactory result, the aerodrome operator shall :

(1) within six hours after the test, identify the deficiencies that caused the result and notify the appropriate air traffic control unit or any other flight information unit of the critical category for fire fighting that corresponds to the level of service that can be provided, for publication in a NOTAM ; and

(2) within seven days after the test, if any deficiency is not corrected, submit a plan to the Authority specifying the measures necessary to obtain a satisfactory result and the dates by which they must be taken, which shall be as early as practicable given the circumstances.

(g) The aerodrome operator shall implement the submitted plan by the dates specified in the plan.

Communica-
tion and
Alerting
System.

12.6.16.11. Requirement : The aerodrome operator shall provide a communication and alerting system that meets the aircraft fire-fighting requirements as specified in IS 12.6.16.13.).

Apron
Control and
Management
Services.

12.6.17. The aerodrome operator shall :

(a) ensure that the Aerodrome control service and the apron control service work in harmony to facilitate safe transition of aircraft between apron control and Aerodrome control ;

(b) ensure close liaison and co-operation between the Apron Control Unit and ATS unit through radio communication and monitoring devices ;

(c) keep an accurate record of movement information including aircraft arrival times, landings and take-offs ;

(d) provide marshalling and leader van services and aircraft stand allocation ;

(e) provide serviceable avio-bridges and docking devices where passenger loading is done through bridges ;

(f) control apron movements by ground vehicles using the Aerodrome operator's apron safety rules as stipulated in approved Aerodrome Manual ;

(g) provide blast fences to protect personnel and vehicles from jet blast and propeller slipstreams ;

(h) ensure that aircraft operators and fuel companies adhere strictly to the holder's procedures during the fuelling of aircraft ;

(i) ensure that apron is swept clean and de-greased regularly and when necessary ;

(j) keep records of activities and dissemination of same to appropriate establishments when necessary ;

(k) provide apron control and management services as prescribed in Chapter 13 Section 13.2.5 of the Aerodrome Standards Manual.

12.6.18. The aerodrome operator shall :

(a) restrict access to movement areas and safety areas only to those ground and/or operations vehicles in possession of airside vehicle permit, company logo, drivers with airside driver's permit and pedestrians necessary for Aerodrome and aircraft operations ;

(b) provide adequate procedures for the safe and orderly access to, and operation on the Aerodrome operational areas, by ground vehicles and pedestrians ;

(c) establish and implement provisions identifying the consequences of non-compliance with the procedures in (b) by an employee, tenant or contractor ;

(d) when an air traffic control service is in operation, ensure that each ground vehicle or pedestrian in movement areas or safety areas is controlled by :

(1) two-way radio communications between each ground vehicle or pedestrian and the control tower ;

(2) an escort vehicle with two-way communication with the control tower ; or

(3) adequate measures authorised by the Authority for controlling ground vehicles and pedestrians, such as markings, signs, signals or guards, when it is not operationally practicable to have two-way radio communications between the tower and the ground vehicle, escort or pedestrian.

(e) ensure that each employee, tenant, or contractor: is trained on the procedures required in this Part "Ground vehicles and pedestrians" prior to moving on foot, or in a ground vehicle, in the movement areas or safety areas of the Aerodrome ;

Ground
Vehicles and
Pedestrians.

B 2090

(f) maintain the following records :

(i) a description and date of training for personnel and use of ground vehicles on movement areas and safety areas ;

(ii) a record for each vehicle and individual access to movement areas ;

(iii) a description and date of any accident or incident in the movement areas involving aircraft and ground vehicle, or aircraft and aircraft, or aircraft and pedestrians ;

(g) ensure ground vehicles and pedestrian operations as prescribed in Chapter 13, Section 13.2.7 of the Aerodrome Standards Manual.

Protection of
Navigation
and Landing
Aids.

12.6.19. The aerodrome operator shall:

(a) prevent the construction of facilities on the Aerodrome that would adversely affect the operation of any electronic or visual navigation aid or air traffic service ;

(b) prevent, as far as it is within the certificate holder's authority, an interruption of the visual or electronic signals of navigation aids ;

(c) provide protection of navigation/landing aids as prescribed in Chapter 9 of the Aerodrome Standards Manual.

Aerodrome
Inspection
Programme.

12.6.20. The aerodrome operator shall :

(a) carry out special inspections :

(1) as soon as practicable after an aircraft accident or incident within the meaning of the requirements specified in ICAO Annex 13 ;

(2) during any period of construction or repair of the Aerodrome facilities or equipment that is critical to the safety of aircraft operations ;

(3) at any time when there are conditions at Aerodrome such as strong winds and rain, that could affect aviation safety ;

(4) after construction, repair, or maintenance works have been carried out on Aerodrome facilities and equipment.

(b) carry out daily serviceability inspections ;

(c) provide initial and recurrent training once in every three (3) years for any person who has duties in respect of the aerodrome inspection programme in at least the following areas :

(1) Aerodrome familiarisation, including aerodrome signs, marking and lighting ;

(2) Aerodrome Emergency Plan ;

(3) Notice to Airmen (NOTAM) notification procedures ;

(4) Procedures for pedestrians and ground vehicles in movement areas and safety areas ;

(5) Procedures for reporting changes in movement area condition ;
and

(d) maintain a reporting system to ensure prompt correction of unsafe aerodrome facilities noted during the inspection, including wildlife strikes.

(e) maintain a record of each person's training for a period of five (5) years and provide the Authority with a copy of any record, if requested.

12.6.21. The aerodrome operator, in addition to satisfying the requirements stipulated in sections 12.6.11 to 12.6.20 and provisions of Part 17 of these Regulation shall :

Public
Protection
and
Aerodrome
Security.

(a) provide aerodrome perimeter fence, road, barriers and doors with controlled access to prevent inadvertent and unauthorised entry of animals and human beings and where necessary provide security lighting on the perimeter fence ;

(b) affix signs and prohibition notices at the perimeter of security areas within the Aerodrome ;

(c) designate an isolated aircraft parking position with adequate lighting facility in his or her Aerodrome for the parking of an aircraft that is known or believed to be the subject of unlawful interference, or which for other security reason needs isolation from normal Aerodrome activities ;

(d) provide aerodrome security in accordance with existing laws and regulations.

12.6.22. The applicant for or holder of aerodrome certificate shall :

Aeronautical
Studies.

(a) carry out an aeronautical study to assess the impact of deviations from the Aerodrome standards in order to :

(i) provide justification for a deviation from Aerodrome standards on the grounds that an equivalent level of safety shall be attained by other means ;

(ii) present alternative means of ensuring the safety of aircraft operations ;

(iii) estimate the effectiveness of each alternative ; and

(iv) recommend procedures to compensate for the deviation ;

(b) publish approval of any deviation in AIP and seek and obtain approval of the Authority on paragraph (a) so as to maintain the currency of his or her Aerodrome certificate ;

(c) engage reputable expertise with practical experience and specialised knowledge in relevant areas in the conduct of technical analysis ;

(d) notify promptly pilots, AIS and the Authority, in compliance with these Regulations, where the only reasonable means of providing an equivalent level of safety is to adopt suitable procedures with cautionary advice ;

B 2092

(e) carry out aeronautical studies as prescribed in Chapter 2 Section 2.1.4 of the Aerodrome Standards Manual and associated guidance Material.

12.6.23. AERODROME WILDLIFE PLANNING AND MANAGEMENT

Application.

12.6.23.1.—(a) This subsection applies to aerodromes :

(1) that are located in a defined area and that in the opinion of the Authority should be certified in the public interest and to enhance the safe operation of the aerodromes ;

(2) that have a waste disposal facility within 13km of the geometric centre of the aerodrome ;

(3) that had an incident where a turbine-powered aircraft collided with wildlife other than a bird and suffered damage, collided with more than one bird or ingested a bird through an engine ; or

(4) where the presence of wildlife hazards, including those referred to in IS 12.6.23.1 has been observed in an aerodrome flight pattern or movement area. Subsection 12.6.23.3 applies to all aerodromes.

Wildlife
Strikes.

(b) An Aerodrome Operator shall relate with the appropriate Land use authority to ensure that no wildlife attractant is located within the vicinity of the airport.

12.6.23.2.—(a) The aerodrome operator shall keep records of all wildlife strikes at the aerodrome, including those reported by :

(1) pilots ;

(2) ground personnel ; and

(3) aircraft maintenance personnel when they identify damage to an aircraft as having been caused by a wildlife strike.

(b) Wildlife remains that are found within 60 meters of a runway or an airside pavement area are presumed to be a wildlife strike unless another cause of death is identified.

(c) The aerodrome operator shall submit a written and dated report to the Authority using the ICAO IBIS form for each wildlife strike, within 30 days of its occurrence.

Risk
Analysis.

12.6.23.3.—(a) The aerodrome operator shall collect information in respect of the requirements set out in IS 12.6.23.3 ;

(b) The aerodrome operator shall, after consultation with a representative of the operators in respect of an aircraft, air operators and private operators that use the aerodrome, conduct a risk analysis that evaluates the collected information ;

(c) The risk analysis shall be in writing and include :

(1) an analysis of the risks associated with the wildlife hazards, including those referred to in IS 12.6.23.1 ; and

(2) the measures that are necessary to manage or remove the hazards or to manage or mitigate the risks.

(d) The aerodrome operator shall, at the request of the Authority, make the risk analysis available for inspection.

12.6.23.4. AERODROME WILDLIFE MANAGEMENT PLAN

12.6.23.4.1.—(a) The aerodrome operator shall develop an aerodrome wildlife management plan in accordance with IS 12.6.23.4.1 ; General.

(b) The aerodrome operator shall submit the plan to the Authority, on request by the Authority, in accordance with the requirements set out in IS 12.6.23.4.1(b) ;

(c) The aerodrome operator shall keep a copy of the plan at the aerodrome and it shall, on request by the Authority, be made available to the Authority ;

(d) Aerodrome operator shall implement the plan ;

(e) The aerodrome operator shall review the plan every two years ;

(f) The aerodrome operator shall amend the plan and submit the amended plan to the Authority within 30 days of the amendment if :

(1) the amendment is necessary as a result of the review conducted under (e) above ;

(2) an incident has occurred in which a turbine-powered aircraft collided with wildlife other than a bird and suffered damage, collided with more than one bird or ingested a bird through an engine ;

(3) a variation in the presence of wildlife hazards, including those referred to in IS 12.6.23.1, has been observed in an aerodrome flight pattern or movement area ; or

(4) there has been a change :

(i) in the wildlife management procedures or in the methods used to manage or mitigate wildlife hazards ;

(ii) in the types of aircraft at the aerodrome ; or

(iii) in the types of aircraft operations at the aerodrome.

12.6.23.4.2. An aerodrome wildlife management plan shall :

Content.

(1) identify and describe the risks associated with all wildlife hazards, including those referred to in IS 12.6.23.1, at or near the aerodrome that might affect the safe operation of aircraft, including the proximity of any waste disposal facility or migration route affecting wildlife populations near the aerodrome ;

(2) specify the particular measures that are used by the aerodrome operator to manage or mitigate the risks ;

B 2094

(3) identify and describe the actions that are used by the aerodrome operator to satisfy the requirements set out in IS 12.6.23.4.2 in respect of wildlife strikes, wildlife management logs, and evaluations of habitats, land uses and food sources at or near the aerodrome ;

(4) set out procedures for the management of aerodrome habitats that might attract wildlife ;

(5) set out procedures that prohibits the feeding of wildlife and the exposure of food wastes ;

(6) set out procedures to ensure that all endangered or protected wildlife at the aerodrome are inventoried ;

(7) identify the role of the personnel and agencies involved in wildlife management issues and provide the contact numbers for each ; and

(8) provide details of any wildlife hazard awareness program.

Training.

12.6.23.4.3.—(a) The aerodrome operator shall :

(1) provide training for any person who has duties in respect of the aerodrome wildlife management plan at least once every three years regarding their assigned duties and the matters set out in IS 12.6.23.4.3 ; and

(2) ensure that any person who has duties in respect of the aerodrome wildlife management plan holds any required firearm permit.

(b) The aerodrome operator shall maintain a record of each person's training for a period of ten years and provide the Authority with a copy of any record, if requested.

Communication and Alerting Procedure.

12.6.23.4.4. The aerodrome operator shall establish a communication and alerting procedure for wildlife management personnel in accordance with IS 12.6.23.4.4 to alert pilots as soon as possible of the wildlife hazards at the aerodrome and the risks associated with those hazards.

Pavement Strength and Overload Operations.

12.6.24. The aerodrome operator shall not permit overloading of pavements beyond the design capacity particularly when it is observed that the pavements are exhibiting signs of distress or failure. However occasional minor overload on serviceable pavements is acceptable provided the following specifications are adhered to :

(a) for flexible pavements, occasional movements by aircraft with Aircraft Classification Number (ACN) not exceeding 10 per cent above the reported Pavement Classification Number (PCN) should not adversely affect the pavement ;

(b) for rigid and composite pavements, in which a rigid pavement layer provides a primary element of the structure, occasional movements by aircraft with ACN not exceeding 5 per cent above the reported PCN should not adversely affect the pavement ;

(c) if the pavement structure is unknown, the 5 per cent limitation should apply ; and

(d) the annual number of overload movements should not exceed approximately 5 per cent of the total annual aircraft movements.

12.6.25.—(a) The aerodrome operator shall implement a quality control programme as prescribed in the Aerodrome Standards Manual.

Quality
Control
Programme.

(b) The quality control programme shall include :

(i) the maintenance of Aerodrome installations, equipment and terminal building facilities ;

(ii) the delivery of quality service to passengers and aircraft operators ; and

(iii) the measurement of the quality of service.

(c) The aerodrome operator shall pay attention to :

(i) departing and arriving passengers and baggage clearing time ;

(ii) the provision of flight information to Aerodrome users ;

(iii) sanitation ;

(iv) directional signs ;

(v) lighting and ambient temperature conditions.

12.6.26. The Aerodrome operator shall ensure the implementation of its approved Environmental Management Plan. The Plan shall include :

Environmental
Protection.

(a) measures of handling of all types of wastes : oil and grease spills, air, noise and water pollution;

(b) regular environmental audit by independent qualified experts to ensure the appropriateness and compliance with the environmental management plan ; and

(c) records showing compliance with extant environmental protection laws, regulations, guidelines and directives of relevant government agencies. The Aerodrome Operator shall make such records available to the Authority whenever requested.

12.6.27. The aerodrome operator shall :

Removal of
Disabled
Aircraft.

(a) establish and implement a disabled aircraft removal plan as prescribed in Chapter 13 Section 13.2.3 of the Aerodrome Standards Manual ;

(b) designate an experienced and competent officer representing the Aerodrome operator to co-ordinate and liaise with ATS, the Accident Investigation Bureau, the Authority, the Aircraft operator, Customs and Immigration Departments if the aircraft is involved in international operation, and note that the aircraft is the property of the Aircraft operator and his or her insurers and that the task of moving the aircraft is the responsibility of the Aircraft operator or owner ;

B 2096

(c) provide the capability of removing the disabled aircraft by following his or her plan for supplying of equipment, for dealing with nominated agents acting on behalf of each operator at the Aerodrome and local contractors capable of facilitating the aircraft removal operations ;

(d) make available a mobile office for the aircraft removal operation with communication links with ATS ;

(e) secure the scene of the incident or accident with security personnel ;

(f) keep records of all events, and photographs of the scene.

Handling and
Storage of
Aviation
Fuel/Ground
servicing of
aircraft.

12.6.28.—(a) Each aerodrome operator shall maintain standards authorized by the Authority for protecting against fire and explosions in storing, dispensing, and otherwise handling fuel on the aerodrome. These standards shall cover facilities, procedures, and personnel training and shall address at least the following :

(1) Bonding.

(2) Public protection.

(3) Control of access to storage areas.

(4) Fire safety in fuel farm and storage areas.

(5) Fire safety in mobile fuelers, fueling pits, and fueling cabinets.

(6) Training of fueling personnel in fire safety in accordance with paragraph (d) of this section.

(7) The fire code of the public body having jurisdiction over the aerodrome.

(b) Each aerodrome operator shall require all fueling agents operating on the aerodrome to comply with, the standards established under paragraph (a) of this section and shall perform reasonable surveillance of all fueling activities on the aerodrome with respect to those standards.

(c) Each aerodrome operator shall inspect the physical facilities of each aerodrome tenant fueling agent at least once every 3 consecutive months for compliance with paragraph (a) of this section and maintain a record of that inspection for at least 12 consecutive calendar months.

(d) Each aerodrome operator shall provide fire extinguishing equipment suitable for at least initial intervention in the event of a fuel fire and personnel trained in its use shall be readily available during the ground servicing of an aircraft and there shall be a means of quickly summoning the rescue and fire fighting service in the event of a fire or major fuel spill.

(e) During aircraft refueling operations while passengers are embarking, on board or disembarking, ground equipment shall be positioned so as to allow :

(1) the use of a sufficient number of aircraft exits for expeditious evacuation ; and

(2) a ready escape route from each of the exits to be used in an emergency.

(f) The training required in paragraph (a)(6) of this section shall include at least the following :

(i) At least one supervisor with each fueling agent shall have completed an aviation fuel training course in fire safety that is authorized by the Authority. Such an individual shall be trained prior to initial performance of duties, or enrolled in an authorized aviation fuel training course that should be completed within 90 days of initiating duties, and receive recurrent instruction at least every 24 consecutive calendar months.

(ii) All other employees who fuel aircraft, accept fuel shipments, or otherwise handle fuel shall receive at least initial on-the-job training and recurrent instruction every 24 consecutive calendar months in fire safety from the supervisor trained in accordance with paragraph (f)(i) of this section.

(e) Each aerodrome operator shall obtain a written confirmation once every 12 consecutive calendar months from each fueling agent that the training required by paragraph (d) of this section has been accomplished. This written confirmation shall be maintained for 12 consecutive calendar months and when requested, made available to the Authority for inspection.

(f) Unless otherwise authorised by the Authority, each aerodrome operator shall require each fueling agent to take immediate corrective action whenever the aerodrome operator becomes aware of non-compliance with a standard required by paragraph (b) of this section. The certificate holder shall notify the Authority immediately when non-compliance is discovered.

12.7. USE OF HELIPORTS

12.7.1. GENERAL.

12.7.1.1. This section shall apply to the certification and operation of heliports in Nigeria with the exception of military heliports.

Applicability.

12.7.2.—(a) The Minister may approve the establishment and development of heliport anywhere in Nigeria ;

Establishment of Heliports in Nigeria.

(b) Roads, approaches, apparatus, equipment, buildings and other accommodations in connection to such heliports shall be maintained by the owners in conformity with these regulations and any other requirement as may be prescribed by the Authority from time to time.

12.8.1.—(a) No person or corporate entity shall commence construction or reconstruction of an heliport without approval of the Authority.

Design/ Operation of Heliports.

(b) Pursuant to Regulation 12.8.1(a), the Heliport operator shall submit to the Authority the following information for assessment :

B 2098

- (i) heliport layout and Markings, lights and signs plans ;
- (ii) architectural drawings of the terminal and other operational buildings.

(c) No person shall operate a heliport in Nigeria (mobile or fixed) for the take-off and landing of helicopters engaged in flights for the purpose of public transport unless such a person is a holder of a Heliport or Aerodrome Certificate granted under these Regulations.

Restrictions/
Prohibitions.

12.8.2.—(a) Except with the approval by the Authority, no helicopter shall operate at a heliport.

(b) No heliport operator operate in the night except for emergency purposes granted by the Authority.

(c) Subject to the approval, the Authority will restrict or prohibit flights at any heliport at which aviation facilities for emergency night flights are lacking; or where the terrain, landing surface conditions or other objects in the vicinity of the heliport could cause a hazard to the operation of helicopters.

(d) The Authority shall restrict or prohibit operation at an aerodrome either absolutely or subject to any exceptions or conditions that the Authority shall specify, if the restriction is necessary for aviation safety and/or in the public interest.

Exemptions.

12.9.—(a) The Authority may exempt, in writing, a heliport operator from complying with specific provisions of these Regulations.

(b) The exemption process shall be in accordance with Part 1.4.

(c) An exemption is subject to the heliport operator complying with the conditions and procedures specified by the Authority in the Heliport Certificate as being necessary in the interest of safety.

(d) Deviation from these Regulations and the conditions and procedures referred to in (c) above shall be set out in an endorsement on the Aerodrome Certificate and reported in the Aeronautical Information Publication (AIP).

Heliport
Certification.

12.10. The five phases for heliport certificate approval are :

- (i) expression of interest by an intending applicant for an heliport certificate ;
- (ii) assessment of the formal application including evaluation of the heliport manual ;
- (iii) assessment of the heliport facilities and equipment ;
- (iv) issuance or refusal of a heliport certificate ; and
- (v) Publication of the certified status of a heliport and the required details in the AIP.

NOTE : Details of the certification process is contained in the advisory circular, NCAA-AC-ARD002, on certification of aerodrome

12.10.1.—(a) A person shall not operate a Heliport if the Heliport is not certified by the Authority.

Requirement to hold Heliport Certificate.

(b) The operator of an heliport intended for public use shall be in possession of an heliport certificate. This also applies to heliports owned by corporate entities engaged in business activities.

12.10.2. APPLICATION FOR HELIPORT CERTIFICATE.

12.10.2.1. The Heliport operator shall submit the following to the Authority for acceptance/approval :

Application for Heliport Certificate.

(a) An application for the issuance of Heliport Certificate shall be made to the Authority in the appropriate form as prescribed by the Authority. The application shall include :

(i) the Heliport Manual and Statement of compliance demonstrating the Heliport Operator's Heliport Manual is in compliance with the relevant provisions of the Aerodrome Standards Manual ;

(ii) the plans of Heliport as specified in IS 12.11.3 including obstacle chart 'A' showing details of obstructions marked/lighted ;

(iii) security clearance from the Federal Government ;

(iv) written approval from the town planning authority where applicable ;

(v) Environmental Impact Assessment approval from the Ministry of Environment ;

(vi) proof of payment of the appropriate fee prescribed by the Authority ;

(vii) adequate insurance cover ; and

(viii) particulars of non-compliance with, or deviations from the standards prescribed in Nig. CARs Part 12 and/or Aerodrome Standards Manual (ASM).

12.10.3. The Authority may approve the application and accept the Heliport Manual of the applicant for a Heliport Certificate subject to the provisions in this section and grant a Heliport Certificate to an applicant if :

Grant of Heliport Certificate.

(a) the Heliport facilities and equipment are in accordance with the standards specified in Chapter 15 of the Aerodrome Standards Manual ;

(b) the heliport manual prepared for the applicant's heliport accurately describes the facilities, services and equipment at the aerodrome ;

(c) the Heliport operating procedures make satisfactory provision for the safety of helicopters ;

(d) the applicant would, if granted a certificate, have the necessary competence, experience and resources to operate and maintain the Heliport ;

(e) an acceptable Safety Management System is in place at the Heliport.

B 2100

Refusal to grant Heliport Certificate.

12.10.4. If the Authority refuses to grant a Heliport Certificate to an applicant, the Authority shall give the applicant notice of the refusal, and the reasons for it, not later than 14 days from the date of refusal.

Duration of Heliport Certificate.

12.10.5. A Heliport Certificate shall remain in force for a period of three (3) years unless suspended or cancelled by the Authority.

Renewal of Heliport Certificate.

12.10.6. A Heliport operator shall ensure that renewal of his or her Heliport Certificate is commenced not less than 90 days to the date of expiration of his or her certificate.

Suspension of Heliport Certificate by the Authority.

12.10.7.—(a) The Authority may by written notice suspend the Heliport Certificate if the heliport facilities, operations, or maintenance are not of the standard necessary for the safety of helicopter and air navigation or if :

- (1) the Heliport operator's safety management system is found to be inadequate ;
- (2) it is in the interest of operational safety ;
- (3) all other means for timely correction of the unsafe condition or ensuring safe aircraft operations have not yielded the required results ;
- (4) the technical proficiency or qualifications of the Heliport operator to perform the duties to meet the critical safety requirements in accordance with the regulations are found inadequate ;
- (5) the operator resists or is unwilling to take action to correct or mitigate the condition affecting aviation safety ; or
- (6) the operator fails to perform an already agreed upon corrective action and suspension of the certificate is the last resort to avoid unsafe operations in the Heliport Movement Area.

(b) The Authority shall suspend a Heliport Certificate if the certificate is transferred to a third party without the consent of the Authority or if any conditions of the certificate have been breached ;

(c) Before suspending a Heliport Certificate, the Authority shall :

- (1) give to the holder a show cause notice that :
 - (i)* sets out the facts and circumstances that, in the opinion of the Authority, would justify the suspension ; and
 - (ii)* invites the holder to show cause, in writing, within 14 days after the date of the notice, why the certificate should not be suspended.
- (2) The Authority shall take into account any written submission that the holder makes to the Authority within the time allowed.

Revocation of Heliport Certificate by the Authority.

12.10.8.—(a) The Authority may by written notice revoke the Heliport Certificate if :

- (1) the Heliport operator is incapable or unwilling to carry out corrective action or has committed/repeated serious violations ;

(2) the Heliport operator has demonstrated a lack of responsibility, such as deliberate and flagrant acts of non-compliance or falsification of records jeopardizing aviation safety ; or

(3) the Heliport operator has made it convincingly clear that the continued operation of the aerodrome will be detrimental to the public interest.

12.10.9. The Authority, when granting the Heliport Certificate shall endorse the conditions for the type and use of the heliport and other details as contained in the Heliport Certificate. Endorsement of Condition on Heliport.

12.10.10. The Authority may amend a Heliport Certificate when : Certificate amendment of Heliport Certificate.

(1) there is a change in the ownership or management of the heliport ; or

(2) there is a change in the use or operation of the heliport ; or

(3) there is a change in the boundaries of the heliport ; or

(4) the holder of a Heliport Certificate makes a request for an amendment.

12.10.11. The Authority may cancel a Heliport Certificate if the heliport operator voluntarily gives notice, in writing, to surrender his or her Heliport Certificate : Voluntary Surrender of Heliport Certificate.

(a) The Heliport Certificate holder shall give the Authority 90 days written notice of the date on which the certificate is to be surrendered in order that suitable action can be taken ;

(b) The Authority shall cancel the certificate on the date specified in the notice.

12.10.12.—(a) The Authority may approve the transfer of a Heliport Certificate when : Transfer of Heliport Certificate.

(1) the current holder of the Heliport Certificate notifies the Authority in writing, at least 90 days before ceasing to operate the heliport ;

(2) the current holder of the Heliport Certificate notifies the Authority, in writing, of the name of the transferee ;

(3) the transferee applies to the Authority, in writing, within 90 days before the current holder of the Heliport Certificate ceases to operate the heliport ; and

(4) the requirements set out in sections 12.10.12(a) 1 - 3 above, are met by the transferee.

(b) If the Authority does not consent to the transfer of a Heliport Certificate, it shall notify the transferee, in writing, of its reasons not later than 30 days after making that decision.

12.10.13.—(a) The Authority may issue an interim heliport Certificate to the applicant referred to in section 12.10.13 or the proposed transferee of a Interim Heliport Certificate.

B 2102

Heliport Certificate referred to in these Regulations authorising the applicant or transferee to operate an Heliport if the Authority is satisfied that :

- (1) an Heliport Certificate in respect of the heliport will be issued to the applicant or transferred to the transferee as soon as the application procedure for the grant or transfer of an Heliport Certificate has been completed ; and
- (2) the grant of the Interim Certificate is in the public interest and is not detrimental to aviation safety.

(b) An Interim Heliport certificate issued pursuant section to regulation 12.10.13(a) shall expire on ;

- (1) the date on which the Heliport Certificate is issued or transferred, or
- (2) the expiry date specified in the interim Heliport Certificate ; whichever is earlier.

(c) These regulations apply to an Interim Heliport Certificate in the same manner as they apply to a Heliport Certificate.

12.11. HELIPORT MANUAL

Preparation of Heliport Manual.

12.11.1. The Heliport operator shall have a manual, to be known as the Heliport Manual which shall :

- (1) be typewritten or printed, and signed by the Heliport operator ;
- (2) be in a format that is easy to revise ;
- (3) have a system for recording the currency of pages and amendments thereto, including a page for logging revisions ; and
- (4) be organised in a manner that will facilitate the preparation, review and acceptance/approval process ;
- (5) contain all pertinent information concerning the heliport site, facilities, services, equipment, operating procedures, organization and management ;
- (6) demonstrate that the heliport conforms to specifications of Aerodrome Standards Manual chapter 15 ;
- (7) take the form and contains information as detailed in Nig.CARs Part 12, IS12.11.3

Location of Heliport Manual.

12.11.2.—(a) the Heliport operator shall provide the Authority with a complete and current copy of the Heliport Manual.

(b) the operator shall keep at least one complete and current copy of the Heliport Manual at the heliport and one copy at the operator's principal place of business if other than the Heliport.

(c) the heliport operator shall make the complete and current copy of the Heliport Manual available for inspection by authorised officers of the Authority.

12.11.3. The operator of the Heliport shall include the following particulars in a Heliport manual as provided in IS 12.11.3, to the extent that they are applicable to the heliport, under the following parts :

Information to be included in the Heliport Manual.

PART 1. General information set out in Part 1 of the IS12.11.3 of these regulations on the purpose and scope of the Heliport manual ; the legal requirement for a Heliport certificate and a heliport manual as prescribed in the regulations; conditions for use of the Heliport; the aeronautical information services available and the procedures for their promulgation; the system for recording helicopter movements and the obligations of the heliport operator.

PART 2. Particulars of the Heliport site as set out in Part 2 of the IS 12.11.3 of these regulations.

PART 3. Particulars of the Heliport required to be reported to the aeronautical information service as set out in Part 3 of the IS 12.11.3 of these regulations.

PART 4. The Heliport operating procedures and safety measures as set out in Part 4 of the IS 12.11.3 of these regulations. This may include references to air traffic procedures such as those relevant to low visibility operations. Air traffic management procedures are normally published in the air traffic services manual with a cross-reference to the Heliport manual.

PART 5. *Safety Management System*

Details of the Heliport administration and the safety management system as set out in Part 5 of the IS 12.11.3 of these regulations.

12.11.4. The Heliport operator shall keep the copies of the Heliport Manual required by Regulation 12.11.1 in a printed form. Other copies may be kept in an electronic form.

Form of Heliport Manual.

12.11.5.—(a) The Heliport Operator shall amend the Heliport Manual whenever it is necessary to maintain the accuracy of the information in the manual ;

Amendments of Heliport Manual.

(b) The Authority may give written directives to the heliport operator requiring operator to amend the Heliport Manual if necessary ;

(c) The Heliport operator shall comply with the directive given to the operator by the Authority in paragraph (b).

12.11.6. The Heliport operator shall inform the Authority, in writing, of any amendment to the Heliport Manual within 30 days.

Notice of Amendments.

12.11.7. The Authority shall approve the Heliport Manual and any amendments thereto, provided they meet the requirement of this section.

The Authority's approval of the Heliport Manual.

B 2104

Heliport
Manual
Controller.

12.11.8. The Heliport operator shall appoint a person to be the Heliport Manual Controller, whose functions shall include :

(a) keeping a record of persons who hold copies of the whole or part of the Heliport Manual ;

(b) updating of information in the manual given to those holders referred to in (a).

Heliport
Design
Requirements

12.12.—(a) An applicant for the issuance of a Heliport Certificate shall ensure that the heliport is provided with the following in the heliport manual :

(1) heliport data ;

(2) physical characteristics ;

(3) obstacle limitation surfaces ;

(4) visual aids ; and

(5) heliport services.

(b) The Heliport data, physical characteristics, obstacle limitation surfaces, visual aids, heliport services(including equipment and installations) provided at the Heliport shall comply with the appropriate Heliport design standards as prescribed in Chapter 15 of the Aerodrome Standards Manual.

12.13. OBLIGATIONS OF THE HELIPORT OPERATOR

Compliance
with
standards
and
practices.

12.13.1. A Heliport operator shall comply with the standards and practices specified in the Aerodrome Standards Manual and these regulations.

Competence
of
Operational
and
Maintenance
Personnel.

12.13.2.—(1) The Heliport operator shall employ an adequate number of qualified and skilled personnel to perform all critical activities for Heliport operation and maintenance.

(2) The operator shall train all operational and maintenance personnel who access safety areas and perform duties in compliance with the this Regulation. This training shall be completed prior to the initial performance of such duties and at least be retrained once every 3 years. The curriculum for initial and recurrent training shall include at least the following areas :

(a) heliport familiarisation, including marking, lighting, and signs system ;

(b) Procedures to access an operation/safety areas ;

(c) Heliport Emergency Plan ;

(d) heliport communications, including radio communication, where applicable, between the air traffic control tower and personnel, use of the common traffic advisory frequency if there is no air traffic control tower or the tower is not in operation, and procedures for reporting unsafe heliport conditions ;

(e) Duties required under the Heliport Manual and the requirements of this regulation ;

(f) In respect of Heliport maintenance, the training of personnel shall include the following areas as appropriate :

- (i) Maintenance of the paved and unpaved areas ;
- (ii) Heliport safety areas ;
- (iii) Heliport drainage and fencing ;
- (iv) Heliport Visual aids ;
- (v) Passenger building facilities.

(3) The operator shall keep a record of all training completed by each individual. This shall, at a minimum, a description and date of training received and provide the Authority with a copy of this record, if requested ;

(4) The operator shall, as appropriate, comply with the following training requirements :

- (a) Aircraft Rescue and Fire Fighting operational requirements ;
- (b) heliport Inspection programme ;
- (c) Wildlife Hazard management (where applicable).

(5) The heliport operator shall implement a programme to upgrade the competency of the personnel.

(6) The aerodrome operator shall submit to the Authority, training programmes for operational and maintenance personnel for approval.

12.13.3.—(a) The Heliport operator shall maintain the Heliport in accordance with the procedures set out in the approved Heliport Manual ;

(b) To ensure the safety at the heliport, the Heliport operator shall :

(i) provide and maintain navigational visual aids which includes : wind direction indicators, lights, markings, markers and signs on the Heliport as prescribed in the Aerodrome Standards Manual.

(ii) maintain heliport surfaces and provide proof of friction tests on helideck (minimum friction coefficient value of 0.65).

(iii) carryout the 75kg hammer drop test on helideck safety net.

(iv) submit/implement a corrective action plan for mitigating the safety concerns at an aerodrome.

(c) carry out checks, preventive maintenance and repairs on the heliport facilities, using a maintenance programme ;

(d) co-ordinate work and ensure compliance with safety requirements for routine maintenance, minor or major construction or maintenance work at

Heliport
operation
and
maintenance.

B 2106

the Heliport in line with the procedures in Chapter 5 of the Aerodrome Standards Manual and related guidance material ;

(e) The Heliport operator shall co-ordinate with the ATS provider in order to be satisfied that appropriate air traffic services are available to ensure the safety of helicopters in the airspace associated with the Heliport. The co-ordination shall cover other areas related to safety such as aeronautical information service, meteorological service and aviation security.

Heliport
Operator's
Safety
Management
System.

12.13.4. The Heliport operator shall :

(a) implement a safety management system acceptable to the Authority as prescribed in Nig.CARs Part 20 ;

(b) require all users of the Heliport to comply with the requirements laid down by the Heliport operator with regard to safety at the Heliport ;

(c) arrange for an external audit and inspection programme for evaluating other users, including ground handling agencies and other organisations working at the heliport.

Passenger
briefing
room.
Access to
the Heliport.

12.13.5. The heliport operator shall provide a briefing room for safety briefing.

12.13.6. The applicant for or holder of Heliport Certificate shall :

(a) allow access of personnel so authorised by the Authority to inspect, audit and test the Heliport facilities, services and equipment, inspect the Heliport operator's document and records in order to meet its continuing surveillance obligation and ensure safety of heliport operations.

(b) co-operate in conducting the activities referred to in paragraph (a) above.

Heliport
Inspection.

12.13.7. The Heliport operator shall inspect the Heliport daily and as circumstances require to ensure aviation safety.

Obstacle
Environment.

12.13.8. The Heliport operator shall :

(a) establish the obstacle limitation surfaces and meet the requirements for the surfaces and any obstacles that may affect them, as set out for Heliports in Chapter 15, section 15.4 of the Aerodrome Standards Manual.

(b) remove from the Heliport surface any obstruction that is likely to be hazardous to helicopter operation.

(c) notify the Authority prior to commencement of construction or alteration works.

(d) monitor and report to the Authority any erection of obstacles within the obstacle limitation surfaces to ensure the safety of airspace for helicopter operations.

B 2107

12.13.9. The heliport operator shall :

Public
Protection
and Heliport
Security.

(a) provide public protection and Heliport security in accordance with Part 17 of these Regulations ;

(b) provide perimeter fence, road, barriers and doors with controlled access to prevent inadvertent and unauthorised entry of animals and human beings and where necessary provide security lighting on the perimeter fence ;

(c) affix signs and prohibition notices at the perimeter of security areas within the heliport.

12.13.10. The Heliport operator shall ensure the accuracy of the determination and reporting of Heliport related aeronautical data with emphasis on the following areas :

Heliport
Data.

(1) Adherence to accuracy and integrity requirements set forth in the Aerodrome Standards Manual ;

(2) Maintenance of integrity of aeronautical data and avoidance of corruption of data at all times ;

(3) Ensuring that data are measured or described as appropriate and should cover heliport reference point, elevation, final approach and take-off area (FATO), touchdown and lift-off area (TLOF) and declared distances and other required data items specified in the Aerodrome Standards Manual.

12.13.11. A Heliport operator shall adhere to the requirement to notify and report appropriately to the Authority, the air traffic service provider and pilots any condition that may affect aviation safety, within the specified time limits required by these Regulations.

Notifying
and
Reporting.

12.13.12. The Heliport operator shall provide at least one final approach and take-off area (FATO), one touchdown and lift-off area (TLOF), helicopter clearway where necessary, safety areas, helicopter ground taxiways, air taxiways, air transit routes and apron with particular attention to the following :

Physical
Characteris-
tics.

(a) class of helicopters the Heliport can serve ;

(b) local conditions such as elevation, temperature and visual or general meteorological conditions ; and

(c) the standards and specifications prescribed in section 15.5.3 of the Aerodrome Standards Manual.

12.13.13. The Heliport operator shall provide and maintain at least one wind direction indicator, markings and markers, heliport beacon, Visual approach slope indicator (HAPI and PAPI, APAPI) lights including approach lightings where desirable and practicable, aiming point lights, taxiway lights and floodlighting of obstacles in accordance with the requirements specified in Chapter 15, section 15.5.1, 15.5.2, 15.5.3, of the Aerodrome Standards Manual.

Visual Aids.

B 2108

Rescue and
Fire Fighting
at Heliports.

12.13.14. The Heliport operator shall :

(a) determine the level of protection to be provided for rescue and fire fighting based on the over-all size of the largest helicopter that uses the heliport in accordance with heliport fire fighting category ;

(b) provide principal extinguishing agents (foam compound) meeting the minimum performance level B ;

(c) provide complimentary agents preferably dry chemical powder or carbon dioxide ;

(d) provide vehicles with a discharge rate of foam compound as prescribed in Chapter 15, section 15.6.1.4. of the Aerodrome Standards Manual ;

(e) provide rescue equipment commensurate with the level of helicopter operations ;

(f) equip the fire fighting unit with trained personnel, vehicle and equipment to achieve a response time not exceeding two minutes in optimum conditions of visibility and surface conditions ;

(g) provide rescue and fire fighting services as prescribed in Chapter 15, section 15.6.1 of the Aerodrome Standards Manual.

Heliport
Emergency
Management
Systems.

12.13.15. The Heliport operator shall :

(a) establish procedures to ensure that all participants in any heliport emergency with allocated duties are familiar with and are properly trained for their assignments ;

(b) test the effectiveness of the emergency management system through periodic exercise including a full-scale heliport emergency exercise annually ;

(c) correct any deficiencies identified during any full-scale exercise and review his or her system with the aim of achieving improved efficiency and safety.

Aeronautical
Studies.

12.13.16. The Heliport operator shall carry out aeronautical studies where necessary under the conditions, procedures and technical guidelines given in Chapter 2, section 2.1.4 of the Aerodrome Standards Manual and this section.

IMPLEMENTING STANDARDS (IS)

IS:12.4.2.— INFORMATION TO BE INCLUDED IN THE AERODROME MANUAL.

1. General information includes the following :

General.

- (a) Purpose and scope of the Aerodrome Manual ;
- (b) The legal requirement for an Aerodrome Certificate and an Aerodrome Manual as prescribed in these Regulation ;
- (c) Conditions for use of a Public or Private Aerodrome; a statement to indicate that the Aerodrome shall at all times, when it is available for the take-off and landing of Aircraft, be also available to all persons on equal terms and conditions ;
- (d) The available aeronautical information systems and procedures for its adoption ;
- (e) The system for recording aircraft movements ; and
- (f) Obligations of the Aerodrome Operator to the Authority including granting authorised personnel, access to the Aerodrome to carry out safety audit inspection, testing and to be responsible for notifying or reporting as prescribed in the Regulations ;
- (g) Co-ordination Policy or Letters of Agreement between AIS and Aerodrome Operator on areas of co-ordination including but not limited to Aerodrome Emergency Planning, Aerodrome Condition Reporting and Aerodrome Vehicle Operations.

2. General information, including the following :

Particulars of the Aerodrome Site.

- (a) a plan of the Aerodrome showing the main Aerodrome facilities for the operation of the Aerodrome including, particularly, the location of each Wind Direction Indicator ;
- (b) a plan of the Aerodrome showing the Aerodrome boundaries ;
- (c) a plan showing the distance of the Aerodrome from the city or other populous area, and the location of any Aerodrome facilities and equipment outside the boundaries of the Aerodrome ; and
- (d) particulars of the title of the Aerodrome site. If the boundaries of the Aerodrome are not defined in the title documents, particulars of the title to or interest in the property on which the Aerodrome is located and a plan showing the boundaries and position of the Aerodrome.

3. PARTICULARS OF THE AERODROME REQUIRED TO BE REPORTED TO THE AERONAUTICAL INFORMATION SERVICE (AIS)

3.1.—(a) the name of the Aerodrome ;

General Information.

(b) the location of the Aerodrome ;

B 2110

(c) the geographical coordinates of the Aerodrome reference point determined in terms of the World Geodetic System—1984 (WGS-84) reference datum ;

(d) the Aerodrome elevation and geoid undulation ;

(e) the elevation of each threshold and geoid undulation, the elevation of the runway end and any significant high and low points along the runway, and the highest elevation of the touchdown zone of a precision approach runway ;

(f) the Aerodrome reference temperature ;

(g) details of the Aerodrome beacon ; and

(h) the name of the Aerodrome operator and the address and telephone number at which the Aerodrome operator may be contacted at all times.

3.2. General information, including the following :

Aerodrome Dimensions and Related Information.

(a) runway - true bearing, designation number, length, width, displaced threshold location, slope, surface type, type of runway and, for a precision approach runway, the existence of an obstacle free zone ;

(b) length, width and surface type of strip, runway end safety areas, stopways ;

(c) length, width and surface type of taxiways ;

(d) apron surface type and aircraft stands ;

(e) clearway length and ground profile ;

(f) visual aids for approach procedures, viz, approach lighting type and visual approach slope indicator system (PAPI/APAPI and T-VASIS/AT-VASIS) ; marking and lighting of runways, taxiways, and aprons ; other visual guidance and control aids on taxiways (including runway holding positions, intermediate holding positions and stop bars) and aprons, location and type of visual docking guidance system ; availability of standby power for lighting ;

(g) the location and radio frequency of VOR Aerodrome checkpoints ;

(h) the location and designation of standard taxi routes ;

(i) the geographical co-ordinates of each threshold ;

(j) the geographical co-ordinates of appropriate taxiway centre line points ;

(k) the geographical co-ordinates of each aircraft stand ;

(l) the geographical coordinates and the top elevation of significant obstacles in the approach and take-off areas, in the circling area and in the vicinity of the Aerodrome. (This information may best be shown in the form of charts such as those required for the preparation of Aeronautical Information Publications, as specified in Annexes 4 and 15 to the Convention) ;

(m) pavement surface type and bearing strength using the Aircraft Classification Number - Pavement Classification Number (ACN-PCN) method ;

(n) one or more pre-flight altimeter check locations established on an apron and their levation ;

(o) declared distances : Take-Off Run Available (TORA), Take-Off Distance Available (TODA), Accelerate-Stop Distance Available (ASDA), Landing Distance Available (LDA) ;

(p) disabled aircraft removal plan : the telephone/telex/facsimile numbers and email address of the Aerodrome coordinator for the removal of a disabled aircraft on or adjacent to the movement area, information on the capability to remove a disabled aircraft, expressed in terms of the largest type of aircraft which the Aerodrome is equipped to remove ; and

(q) rescue and fire-fighting : the level of protection provided, expressed in terms of the category of the rescue and fire-fighting services, which should be in accordance with the longest aeroplane normally using the Aerodrome and the type and amount of extinguishing agents normally available at the Aerodrome.

NOTE : The accuracy of the information in Paragraph 3 above is critical to aircraft safety. Information requiring engineering survey and assessment should be gathered or verified by qualified technical persons.

4. PARTICULARS OF THE AERODROME OPERATING PROCEDURES AND SAFETY MEASURES

4.1. Particulars of the procedures for reporting any changes to the Aerodrome information set out in the AIP and procedures for requesting the issue of NOTAMs, including the following :

Aerodrome Reporting.

(a) arrangement for reporting any changes to the Authority and recording the reporting of changes during and outside the normal hours of Aerodrome operations ;

(b) the names and roles of persons responsible for notifying the changes, and their telephone numbers during and outside the normal hours of Aerodrome operations ; and

(c) the address and telephone numbers, as provided by the Authority of the place where changes are to be reported to the Authority.

4.2. Particulars of the procedures that have been developed and are to be followed in coordination with the agency responsible for preventing unlawful interferences in civil aviation at the Aerodrome and for preventing unauthorised entry of persons, vehicles, equipment, animals or other things into the movement area, including the following :

Access to the Aerodrome Movement Area.

B 2112

(a) the role of the Aerodrome operator, the aircraft operator, Aerodrome fixed base operators, the Aerodrome security entity, the Authority and other government departments, as applicable ; and

(b) the names and roles of the personnel responsible for controlling access to the Aerodrome, and the telephone numbers for contacting them during and after working hours.

Aerodrome
Emergency
Plan.

4.3. Particulars of the Aerodrome emergency plan, including the following :

(a) plans for dealing with emergencies occurring at the Aerodrome or in its vicinity, including the malfunction of aircraft in flight ; structural fire; sabotage, including bomb threats (aircraft or structure); unlawful seizure of aircraft ; and incidents on the aerodrome covering “during the emergency” and “after the emergency” considerations ;

(b) details of test for Aerodrome facilities and equipment to be used in emergencies, including the frequency of those tests ;

(c) details of exercises to test emergency plans, including the frequency of those exercises ;

(d) a list of organisations, agencies and persons of authority, both on and off aerodrome, for site roles; their telephone and facsimile numbers, e-mail and SITA addresses and the radio frequencies of their offices ;

(e) the establishment of an Aerodrome emergency committee to organize training and other preparations for dealing with emergencies ; and

(f) the appointment of an on-scene commander for the overall emergency operation.

Rescue and
Fire-fighting.

4.4. Particulars of the facilities, equipment, personnel and procedures for meeting the rescue and fire-fighting requirements, including the names and roles of the persons responsible for dealing with the rescue and fire-fighting services at the Aerodrome.

NOTE : This subject should also be covered in appropriate detail in the Aerodrome Emergency Plan.

Inspection of
the
Aerodrome
Movement
Area and
Obstacle
Limitation
Surface by
the
Aerodrome
Operator.

4.5. Particulars of the procedures for the inspection of the Aerodrome movement area and obstacle limitation surfaces, including the following :

(a) arrangement for carrying out inspections, including runway friction and water-depth measurements on runways and taxiways, during and outside the normal hours of Aerodrome operations ;

(b) arrangement and means of communicating with the Aerodrome Air Traffic Control unit during an inspection ;

(c) arrangements for keeping an inspection logbook, and the location of the logbook ;

(d) details of inspection intervals and times ;

- (e) inspection checklist ;
- (f) arrangement for reporting the results of inspections and for taking prompt follow-up actions to ensure correction of unsafe conditions ;
- (g) the names and roles of persons responsible for carrying out inspections, and their telephone number during and after working hours ;
- (h) procedure to monitor and report the condition of movement areas ;
- (i) procedure to report the presence of water on runway ; and
- (j) procedures to report slippery runway condition.

4.6. Particulars of the procedures for the inspection and maintenance of aeronautical lights (including obstacle lighting), signs, markers and Aerodrome electrical systems, including the following :

Visual Aids
and
Aerodrome
Electrical
Systems

- (a) arrangement for carrying out inspections during and outside the normal hours of Aerodrome operation, and the checklist for such inspection ;
- (b) arrangements for recording the results of inspections and for taking follow up action to correct deficiencies ;
- (c) arrangements for carrying out routine maintenance and emergency maintenance ;
- (d) arrangements for secondary power supplies, if any, and, if applicable, the particulars of any other method of dealing with partial or total system failure ;
- (e) the names and roles of the persons responsible for the inspection and maintenance of the lighting, and the telephone numbers for contacting those persons during and after working hours ;
- (f) sign plan and Surface Movement Guidance and Control Systems (SMGCS) plan approved by the Authority ;
- (g) procedure to prevent aircraft from entering permanently closed runways and Taxiways.

4.7. Particulars of the facilities and procedures for the maintenance of the movement area, including :

Maintenance
of the
Movement
Area.

- (a) arrangements for maintaining the paved areas ;
- (b) arrangements for maintaining the unpaved runways and taxiways ;
- (c) arrangements for maintaining the runway and taxiway strips ; and
- (d) arrangements for the maintenance of Aerodrome drainage.

4.8. Particulars of the procedures for planning and carrying out construction and maintenance work, safely (including work that may have to be carried out at short notice) on or in the vicinity of the movement area which may extend above an obstacle limitation surface, including the following :

Aerodrome
Works—
Safety.

B 2114

(a) arrangements for communicating with the Aerodrome Air Traffic Control unit during the progress of such work ;

(b) the names, telephone numbers and roles of the persons and organisations responsible for planning and carrying out the work, and arrangements for contacting those persons and organisations at all times ;

(c) the names and telephone numbers, during and after working hours, of the Aerodrome fixed-based operators, ground handling agents and aircraft operators who are to be notified of the work ;

(d) a distribution list for work plans, if required ;

(e) procedure to return a runway to operational status after pavement overlay.

Apron
Management.

4.9. Particulars of the apron management procedures, including the following :

(a) arrangements between Air Traffic Control and the apron management units ;

(b) arrangements for allocating aircraft parking positions ;

(c) arrangements for initiating engine start and ensuring clearance of aircraft push-back ; and

(d) marshalling service ;

(e) leader (van) service.

Apron
Safety
Management.

4.10. Procedures to ensure apron safety, including :

(a) protection from jet blast ;

(b) enforcement of safety precautions during aircraft refuelling operations ;

(c) apron sweeping ;

(d) apron cleaning ;

(e) arrangements for reporting incidents and accidents on an apron ; and

(f) arrangements for auditing the safety compliance of all personnel working on the apron.

(g) management of ground support equipment associated with aircraft handling and loading operations which include, but not limited to the following :

(i) Operation of passenger loading bridge

(ii) Aircraft fuelling

(iii) Aircraft push back

(iv) Aircraft power back

(v) Aircraft towing

(vi) Aircraft power-in arrival and power-out departure

(vii) Aircraft marshalling

B 2115

- 4.11.** Particulars of the procedure for the control of surface vehicles operating on or in the vicinity of the movement area, including the following :
- (a) details of the applicable traffic rules (including speed limits and the means of enforcing the rules) ; and
- (b) the method of issuing driving permits for operating vehicles in the movement area.
- 4.12.** Particulars of the procedures to deal with the danger posed to aircraft operations by the presence of bird or mammals in the Aerodrome flight pattern or movement area, including the following :
- (a) arrangements for assessing wildlife hazards ;
- (b) arrangements for implementing wildlife control programmes ; and
- (c) the names and roles of the persons responsible for dealing with wildlife hazards, and their telephone numbers during and after working hours.
- 4.13.** Particulars setting out the procedures for :
- (a) monitoring the obstacle limitation surfaces and Type A Chart for obstacle in the take-off surface ;
- (b) controlling obstacles within the authority of the operator ;
- (c) monitoring the height of buildings or structures within the boundaries of the obstacle limitation surfaces ;
- (d) controlling new developments in the vicinity of Aerodromes ; and notifying the Authority of the nature and location of obstacles and any subsequent addition or removal of obstacles for action as necessary, including amendment of the AIS publications.
- 4.14.** Particulars of the procedures for removing a disabled aircraft on or adjacent to the movement area, including the following :
- (a) the roles of the Aerodrome operator and the holder of the aircraft certificate of registration;
- (b) arrangements for notifying the holder of the certificate of registration ;
- (c) arrangements for liaising with the Aerodrome Air Traffic Control unit ;
- (d) arrangements for obtaining equipment and personnel to remove the disabled aircraft ; and
- (e) the names, role and telephone numbers of persons responsible for arranging for the removal of disabled aircraft.
- 4.15.** Particulars of the procedures for the safe handling and storage of hazardous material on the Aerodrome, including the following :

Airside
Vehicle
Control.

Wildlife
Hazard
Management.

Obstacle
Control.

Removal of
Disabled
Aircraft.

Handling of
Hazardous
Materials.

B 2116

(a) arrangements for special areas on the Aerodrome to be set up for the storage of inflammable liquids (including aviation fuels) and any other hazardous materials ; and

(b) the method to be followed for the delivery, storage, dispensing and handling of hazardous materials.

NOTE : Hazardous materials include inflammable liquids and solid, corrosive liquids, compressed gases and magnetized or radioactive materials. Arrangements for dealing with the accidental spillage of hazardous materials should be included in the Aerodrome Emergency Plan.

Low-
Visibility
Operations.

4.16. Particulars of procedures to be introduced for low-visibility operations, including the measurement and reporting of runway visual range as and when required, and the names and telephone numbers, during and after working hours, of the persons responsible for measuring the runway visual range.

Protection of
Sites for
Radar and
Navigational
Aids.

4.17. Particulars of the procedures for the protection of sites for radar and radio navigational aids located on the Aerodrome to ensure that their performance will not be degraded, including the following :

(a) arrangements for the control of activities in the vicinity of radar and nav aids installations ;

(b) arrangements for ground maintenance in the vicinity of these installations ; and

(c) arrangements for the supply and installation of signs warning of hazardous microwave radiation.

NOTE 1 : In writing the procedures for each category, clear and precise information should be included on :

when, or in what circumstances, an operating procedure is to be activated; how an operating procedure is to be activated ; actions to be taken ; the persons who are to carry out the actions ; and the equipment necessary for carrying out the actions, and access to such equipment.

NOTE 2 : If any of the procedures specified above are not relevant or applicable, the reason should be given.

Aerodrome
administra-
tion and
Safety
Management
System.

5. Aerodrome Administration.

Particulars of the aerodrome administration, including the following :

(1) an aerodrome organisational chart showing the names and positions of key personnel, including their responsibilities ;

(2) the name, position and telephone number of the person who has overall responsibility for aerodrome safety ; and

(3) aerodrome committees.

Particulars of the safety management system established for ensuring compliance with all safety requirements and achieving continuous improvement in safety performance, the essential features being :

Safety Management System (SMS).

(1) the safety policy, insofar as applicable, on the safety management process and its relation to the operational and maintenance process ;

(2) the structure or organisation of the SMS, including staffing and the assignment of individual and group responsibilities for safety issues ;

(3) SMS strategy and planning, such as setting safety performance targets, allocating priorities for implementing safety initiatives and providing a framework for controlling the risks to as low a level as is reasonably practicable keeping always in view the requirements of the Standards and Recommended Practices in Volume I of Annex 14 to the Convention on International Civil Aviation, and the national regulations, standards, rules or orders ;

(4) SMS implementation, including facilities, methods and procedures for the effective communication of safety messages and the enforcement of safety requirements ;

(5) a system for the implementation of, and action on, critical safety areas which require a higher level of safety management integrity (safety measures programme) ;

(6) measures for safety promotion and accident prevention and a system for risk control involving analysis and handling of accidents, incidents, complaints, defects, faults, discrepancies and failures, and continuing safety monitoring ;

(7) the internal safety audit and review system detailing the systems and programmes for quality control of safety ;

(8) the system for documenting all safety-related aerodrome facilities as well as aerodrome operational and maintenance records, including information on the design and construction of aircraft pavements and aerodrome lighting. The system should enable easy retrieval of records including charts ;

(9) staff training and competency, including the review and evaluation of the adequacy of training provided to staff on safety-related duties and of the certification system for testing their competency ; and

(10) the incorporation and enforcement of safety-related clauses in the contracts for construction work at the aerodrome.

6.—(a) A copy of memorandum of understanding signed with FAAN, and a copy of approved airport security programme detailing the arrangement in place at the airport to ensure optimum implementation of aviation security measures.

Memorandum
of Under-
standing
with Desig-
nated Service
Providers.

B 2118

(b) A copy of memorandum of understanding or agreement signed with NAMA setting out the technical terms under which the services are to be provided.

(c) A copy of memorandum of understanding or agreement signed with NIMET setting out the technical terms under which the services are to be provided.

Extinguishing
Agents and
Equipment.

IS: 12.6.16.6 (a)—(a) The principal extinguishing agent shall be a foam suitable for the type of equipment to be used, and

(1) the foams provided as principal extinguishing agents, and the date acquired ;

(2) the foam concentrates of different types or from a different manufacturer shall not be mixed except where it has been established that they are completely interchangeable and compatible ; and

(3) the quantity of foam concentrates provided on vehicles for foam production shall be in proportion to the quantity of water provided and the foam concentrate selected.

(b) The complementary extinguishing agent shall be a dry chemical powder suitable for the type of equipment to be used, and compatible with the foam or foams selected for use as the principal extinguishing agent at the airport or aerodrome ;

(c) The amount of foam concentrate on board vehicles shall be sufficient for at least two full loads of the required quantity of water ;

(d) Sufficient quantity of foam concentrate shall be held in reserve to allow for four complete discharges, at the correct percentage, of the water requirement for the critical category published. Part of this reserve may be carried on the fire-fighting vehicles ;

(e) A reserve supply of complementary extinguishing agent equivalent to 200 per cent of the quantity of complementary agent requirement for the category published shall be maintained at the airport or aerodrome. The reserve shall include sufficient propellant gas to utilize this reserve complementary agent ;

(f) The turrets and reel mounted hand lines designed for aircraft fire-fighting on vehicle(s) equipped with foam fire-fighting equipment shall be tested at least annually, at all pre-set discharge flow rates, to ensure that the correct discharge rate is being delivered, and the required foam physical characteristics are being met ;

(g) The equipment delivering the complementary extinguishing agent shall be tested at least annually to ensure that the correct discharge rate and reach is being delivered.

IS:12.6.16.10 (b).—(a) KNOWLEDGE AND SKILL TRAINING

—Training shall be provided in the following areas :

(1) *Generic Training*

- (i) AFF Vehicles and Equipment ;
- (ii) Emergency Communications Systems including Fire Alarms ;
- (iii) Fire-Fighting Personnel Safety ;
- (iv) Fire Chemistry ;
- (v) Extinguishing Agents ;
- (vi) Portable Fire Extinguishers ;
- (vii) Fire Hoses, Nozzles, Turrets, and Other Appliances Available for Fire Fighting ;
- (viii) Fire-fighting Operations ;
- (ix) Emergency Aircraft Evacuation Assistance ;
- (x) Aircraft Cargo Hazards ;
- (xi) Live-Fire Training ;
- (xii) First Aid.

(2) *Site-Specific Training*

- (i) Familiarisation with the aerodrome where the fire fighter will be carrying out fire-fighting duties ;
- (ii) Familiarisation with the types of aircraft regularly operating at the airport or aerodrome where the fire fighter will be carrying out fire-fighting duties ; and
- (iii) Familiarisation with fire-fighting duties under the Aerodrome Emergency Response Plan for the aerodrome where the fire fighter will be carrying out fire-fighting duties.

(b) LEVEL OF ACHIEVEMENT TO BE ATTAINED

(1) *Generic Training*

- (i) With respect to AFF vehicles and equipment, the candidate shall be able to :
 - (a) Describe each tool and item of equipment on each aircraft fire-fighting vehicle at the airport or aerodrome, including a description of its designated use, required maintenance, proper storage; and demonstrate its use ;
 - (b) Demonstrate knowledge and skills relative to routine inspection and maintenance of AFF vehicles as required by the manufacturer's specifications and maintenance manuals ; and

B 2120

(c) Demonstrate the knowledge and skill required to operate AFF vehicles, including manual back-up systems.

(ii) With respect to emergency communications systems, including fire alarms, the candidate shall be able to :

(a) Identify the methods and procedures to be followed when an emergency alarm is received ;

(b) Identify radio frequencies and channels assigned for use by the aerodrome to control vehicular traffic ;

(c) Identify radio frequencies and channels assigned for use by the aerodrome Emergency Operations Centre ;

(d) Identify radio frequencies and channels assigned for use by mutual aid organisations ;

(e) Identify radio frequencies and channels assigned for use by responding units and organisations ;

(f) Identify procedures concerning multiple alarms and mutual aid ;

(g) Demonstrate knowledge of the phonetic alphabet ;

(h) Demonstrate the use of all communication equipment utilized by the fire-fighting service ;

(i) Provide an initial status report on a simulated aircraft accident ;
and

(j) Demonstrate standard hand signals used to communicate with aircrew personnel as it relates to aircraft fire fighting.

(iii) With respect to fire-fighting personnel safety, the candidate shall be able to :

(a) Identify the hazards associated with aircraft fire fighting ;

(b) Identify the hazards associated with aircraft and aircraft systems on personnel ;

(c) Identify potential stress effects on personnel involved in a mass-casualty response ;

(d) Identify the purpose and limitations of protective clothing ;

(e) Demonstrate donning protective clothing ;

(f) Demonstrate techniques for action in a fire situation where trapped or disoriented, or when in an hostile environment ;

(g) Identify the hazards associated with cut-in entries ;

(h) Describe the hazardous respiratory environments encountered in aircraft fire fighting ;

(i) Identify techniques for protection from communicable-disease hazards ;

- (j) Describe the proper techniques for approaching aircraft while engines are running ;
- (k) Identify the purpose of self-contained breathing apparatus (SCBA) ;
 - (l) Identify the components and operation of the SCBA provided ;
 - (m) Identify the limitations of the SCBA provided ;
 - (n) Demonstrate that the SCBA is in a safe operating condition for immediate use ;
 - (o) Don SCBA equipment while wearing protective clothing ;
 - (p) Use SCBA equipment in dense smoke, or a blacked out environment ;
 - (q) Change a team member's exhausted air supply cylinder with an air supply cylinder ;
 - (r) While wearing SCBA equipment, demonstrate those actions necessary in the event of one of the following emergency situations :
 - activation of low-air alarm ;
 - exhausted air supply ;
 - regulator malfunction ;
 - damage to face piece ;
 - damage to low pressure hose ;
 - damage to high pressure hose.
- (iv) With respect to fire behaviour, the candidate shall be able to :
 - (a) Explain the fire tetrahedron ;
 - (b) Describe the phases of a fire ;
 - (c) Describe the main products of combustion ;
 - (d) Describe the three methods of heat transfer ;
 - (e) Describe the classes of fire and extinguishment methods ;
 - (f) Define flash point, ignition temperature, flashover, rollover, backdraft and explosion ; and
 - (g) Describe the various aviation fuels' characteristics with respect to fire behaviour and explosion hazard.
- (v) With respect to extinguishing agents, the candidate shall be able to :
 - (a) Identify the extinguishing properties of each agent, including advantages and disadvantages ;
 - (b) Identify those agents used at the aerodrome ;
 - (c) Identify the locations of agents kept in inventory for vehicle re-supply ;

B 2122

- (d) State the quantity of each type of agent carried on each vehicle at the airport or aerodrome ; and
- (e) Identify the preferred agent to use to suppress and extinguish fire in various case scenarios.
- (vi) With respect to portable fire extinguishers, the candidate shall be able to :
 - (a) Identify the classification of fires as they relate to the use of fire extinguishers ;
 - (b) Identify each type of portable fire extinguisher by classification and rating ;
 - (c) Describe the agents' characteristics in the extinguishers used at the aerodrome ;
 - (d) Identify the limitations and operating characteristics of each type of portable fire extinguisher ;
 - (e) Identify the location of each portable fire extinguisher carried on each AFF vehicle used at the aerodrome ;
 - (f) Identify the appropriate extinguisher for a given class of fire from a group of different fire extinguishers ; and
 - (g) Operate the appropriate extinguisher on each class of fire.
- (vii) With respect to fire hoses, nozzles, turrets and other appliances available for fire-fighting, the candidate shall be able to :
 - (a) Identify the location of each tool and item of equipment used at the aerodrome ;
 - (b) Identify the hazards associated with the use of each tool and item of equipment used at the aerodrome ;
 - (c) Demonstrate the proper procedures for use of each tool and item of equipment used at the aerodrome ;
 - (d) Describe the purpose of each hose, nozzle and adapter ;
 - (e) Describe the location of each hose, nozzle and adapter used by the fire-fighting unit at the aerodrome ;
 - (f) Describe the size and length of each hose carried on each AFF vehicle used at the airport or aerodrome ;
 - (g) Demonstrate the proper procedures for use of each hose, nozzle and adapter used at the airport or aerodrome ;
 - (h) Demonstrate the proper procedure to be used when advancing hose for fire attack ;
 - (i) Demonstrate the proper procedure to be used when laying hose to establish a re-supply of water ;

(j) Identify the primary purpose, agent capacity, water capacity, type of agent carried, agent discharge rate and range, personnel requirements, and response limitations for each AFF vehicle used at the airport or aerodrome ;

(k) Demonstrate the operation of handlines and vehicle-mounted discharge devices ; and

(l) Demonstrate the procedures for re-supply using a hydrant, structural vehicles, tank trucks and other vehicles for each AFF vehicle used at the airport or aerodrome.

(viii) With respect to fire-fighting operations, the candidate shall be able to :

(a) State the objective of aircraft fire fighting and the role of the firefighter in response to an aircraft emergency ;

(b) Describe fire-fighting tactics and evacuation of occupied aircraft ;

(c) Describe fire-fighting tactics of unoccupied aircraft ;

(d) Select a strategy and tactics for incident control and termination ;

(e) Perform fire-fighting tactics ;

(f) Explain the correct procedures for fighting three-dimensional fires ;

(g) Explain the correct procedures for fighting engine fires ;

(h) Describe the correct procedures for securing and maintaining a fire free egress route ;

(i) Describe the proper procedure to use when protecting an aircraft fuselage from fire exposure ;

(j) Describe the correct procedures to be used when providing protective streams for personnel ;

(k) Describe the hazards of a brake and wheel fire ;

(l) Describe the correct procedures to be used when fighting a brake and wheel fire ;

(m) Describe the correct procedures for controlling runoff from fire control operations and fuel spills ;

(n) Describe the correct procedures to be used to stabilize aircraft wreckage ;

(o) Describe the safety precautions for controlling fuel spills ;

(p) Describe grounding, bonding and hazards associated with static electricity related to aircraft ;

(q) Describe the hazards of a hydraulic fire ; and

(r) Describe the correct procedures to use in the event of fighting a hydraulic fire.

B 2124

(ix) With respect to emergency aircraft evacuation assistance, the candidate shall be able to :

(a) Describe the correct procedures to use to protect evacuation points ;

(b) Identify those openings to use to gain entry for a given aircraft and situation ;

(c) Select the tools and equipment to use to gain entry for a given aircraft and situation;

(d) While wearing full protective clothing, demonstrate the ability to open:

(i) aircraft doors and exits, or

(ii) equivalent training doors and exits.

(e) Identify potential locations for break-in entry using reference materials, aircraft markings, or general guidelines for a given aircraft ; and

(f) Demonstrate the correct procedures to use for a victim search inside and outside the aircraft.

(x) With respect to aircraft cargo hazards, the candidate shall be able to :

(a) Identify the dangerous goods' classifications ;

(b) Identify the hazards indicated by each label ; and

(c) Identify the emergency procedures to be followed using the reference material in the event of a problem transporting hazardous materials at the airport or aerodrome.

(xi) With respect to live-fire training, in order that the agent is applied with proper technique and the fire extinguished, the candidate shall be able to :

(a) Extinguish a minimum of 9m² fuel fire with a minimum of a 45 kg dry chemical extinguisher ;

(b) Extinguish a minimum of 36m² fuel fire with an AFF vehicle hand line and appropriate agent ;

(c) Extinguish a minimum of 400m² fuel fire with AFF vehicle turrets and appropriate agent ;

(d) Extinguish a three-dimensional aircraft fuel fire with AFF vehicle hand lines and appropriate agent ;

(e) Control simulated engine and auxiliary power unit (APU) fires on aircraft with an AFF vehicle hand line or turrets and appropriate agent ; and

(f) Extinguish a simulated tire assembly fire with an AFF vehicle hand line and appropriate agent.

- (xii) With respect to first aid, the candidate shall be able to :
- (a) Identify primary and secondary life-threatening injuries ;
 - (b) Determine whether or not a victim has an open airway ;
 - (c) Locate an open airway in a person who is not breathing ;
 - (d) Recognize types and characteristics of external and internal bleeding ;
 - (e) Demonstrate techniques to control bleeding ;
 - (f) Perform cardiopulmonary resuscitation ;
 - (g) Recognize shock ;
 - (h) Recognize injuries to the skull, spine, chest, and extremities ;
 - (i) Recognize internal injuries ;
 - (j) Demonstrate procedures for moving patients ;
 - (k) Treat burns ; and
 - (l) Demonstrate knowledge concerning triage methodology.

(2) *Site-Specific Training*

- (i) With respect to familiarisation with the aerodrome where the firefighter will be carrying out fire-fighting duties, the candidate shall be able to :
- (a) Describe the runway and taxiway identification system ;
 - (b) Describe the movement area pavement markings, signs, and lighting ;
 - (c) Identify the various on-field aircraft navigation aids ;
 - (d) Cite aerodrome rules and regulations concerning vehicle movement and access ;
 - (e) Cite rules and regulations governing aerodrome security ;
 - (f) Locate a given point at the aerodrome on a grid map, or other standard map ;
 - (g) Identify terrain features using map symbols ;
 - (h) Identify and locate all emergency access roads and standard routes across the movement area ;
 - (i) Identify and locate all points giving access to the airside from non- operational areas ;
 - (j) Identify and locate all points giving access to portions of the critical fire-fighting access area, located outside the aerodrome perimeter ;
 - (k) Identify installations and features in the critical fire- fighting access area that present a hazard to vehicle response ;

B 2126

- (l) Identify installations and terrain features in the critical fire-fighting access area that limit vehicle response capability ;
 - (m) Identify the direction of travel of fuel in a simulated leak in the fuel distribution system applicable to the aerodrome ;
 - (n) Demonstrate the operation of fuel system valves and pumps to control the flow of fuel within the system applicable to the aerodrome ;
 - (o) Identify hazardous materials that are frequently stored or used on the aerodrome property ; and
 - (p) Identify elements of the aerodrome and surrounding water distribution system.
- (ii) With respect to familiarisation with the types of aircraft regularly operating at the airport or aerodrome where the firefighter will be carrying out fire-fighting duties, the candidate shall be able to :
- (a) Identify the types of aircraft regularly operating at their airport or aerodrome ;
 - (b) Identify the categories of aircraft propulsion systems ;
 - (c) Use the correct terms to describe major aircraft structural components ;
 - (d) Describe the types of batteries found on aircraft and their associated hazards ;
 - (e) Identify the general location of portable fire extinguishers ;
 - (f) Describe the materials used in aircraft construction ;
 - (g) Explain the differences in aircraft construction as it relates to fire fighting ;
 - (h) Use an aircraft crash chart to identify and describe the location of normal and emergency exits, fuel tanks, passenger and crew compartments, oil tanks, hydraulic reservoirs, oxygen tanks, batteries, and break-in points for given aircraft ;
 - (i) Use an aircraft crash chart to describe passenger, crew and fuel capacities for a given aircraft ;
 - (j) Identify a flight data recorder and cockpit voice recorder ;
 - (k) Locate normal entry doors, emergency exit openings and evacuation slides for a given aircraft;
 - (l) Describe the opening of all doors and compartments for a given aircraft;
 - (m) Describe the operation of evacuation slides and/or other emergency egress systems for a given aircraft ;
 - (n) Identify aircrew and passenger locations for a given aircraft ;

(o) Indicate the type of fuel used and location of fuel tanks for a given aircraft;

(p) Locate break-in points for a given aircraft ;

(q) Locate the batteries for a given aircraft ;

(r) Locate key components of the fuel, oxygen, hydraulic, electrical, fire protection, APU, brake, wheel systems, and pressurization systems for a given aircraft ; and

(s) Describe aircraft hazards that may be unique or unusual for a given aircraft.

NOTE : Examples of unusual hazards include military aircraft equipped with ejection seats, tanks containing pesticides on crop-spraying aircraft, and aircraft equipped with additional fuel tanks for ferry purposes.

(iii) With respect to familiarisation with firefighter duties under the Aerodrome Emergency Response Plan where the fire-fighter will be carrying out fire-fighting duties, the candidate shall be able to :

(a) Describe each emergency listed in the plan ;

(b) Describe the chain of command and authority, and identify the individuals associated with each position requiring a response from the aircraft fire-fighting service for each emergency listed in the plan ;

(c) If applicable, describe the procedure for the change of command during any phase of the emergency requiring a response from the aircraft fire-fighting service for each emergency listed in the plan ;

(d) With reference to the emergency response plan, identify other agencies involved in the plan requiring a response from the aircraft fire-fighting service, and describe their respective roles and responsibilities for each emergency listed in the plan ; and

(e) Demonstrate knowledge of their individual role and duties during regular exercises under the plan.

(c) ADDITIONAL TRAINING

(1) *Low-Visibility Training*

At an aerodrome certified for low-visibility operations for Category III approaches, firefighters shall practice the use of low-visibility equipment provided at that aerodrome in simulated Category III low-visibility conditions, and demonstrate the ability to :

(i) Locate a simulated accident site ;

(ii) Navigate the aircraft fire-fighting vehicle to the simulated accident site ; and

(iii) Negotiate terrain and obstacles with the AFF vehicle.

B 2128

(2) *Command and Control Training*

Where a firefighter is assigned operational command and control responsibilities for the aircraft fire-fighting service, training in command and control functions shall be provided to enable that fire-fighter to :

- (i) Assess tactical priorities ;
- (ii) Control and manage a fire stream ;
- (iii) Control and manage resources ;
- (iv) Select, employ and direct a defensive strategy ;
- (v) Assess fire-ground factors ;
- (vi) Direct apparatus placement ; and
- (vii) Explain command procedures.

(d) RECURRENT TRAINING

(1) *General*

Recurrent training shall be provided to enable each firefighter to maintain the level of proficiency established in this standard.

Except for live-fire training, every firefighter must complete training in each element of the standards at least once every three years.

(e) LIVE-FIRE TRAINING

Live-fire drill training shall be provided to all fire-fighting personnel every 12 months as follows :

(i) A live-fire drill shall simulate a realistic fire-fighting situation, and be of sufficient size and intensity to provide a challenge to the firefighter in relation to the equipment used ;

(ii) The conditions simulated in a live-fire drill shall emulate the type of fire which could be encountered on a typical aircraft at the aerodrome ;

(iii) During the drill, each firefighter shall demonstrate the control and extinguishment of a simulated aircraft fire using :

(a) Handlines and or turrets using an AFF vehicle of a type used at the aerodrome, and

(b) Fire-fighting streams to protect firefighters and aircraft occupants using either handlines or turrets.

NOTE 1 : It is intended that the live-fire drill will provide an opportunity for the fire-fighting team to become familiar with the use of all fire extinguishment equipment that will be used in the event of an accident. If possible, a simulated evacuation of aircraft occupants will help in creating a realistic situation.

NOTE 2 : Training curriculum on ARFF Personnel are contained in the advisory circular : NCAA-AC-ARD005 “Assessing Competence of ARFF Training Organizations and ARFF Personnel.”

IS:12.6.16.10(d).—(a) TRAINING RECORDS

Fire Fighter
Qualifica-
tions.

Individual training records shall be maintained on each firefighter and shall include as a minimum :

- (1) the name of the individual being trained ;
- (2) the date of training ;
- (3) the place where training is received ;
- (4) the subjects covered and course methodology ;
- (5) the climatic conditions, in the case of practical training ;
- (6) the duration of training ;
- (7) any instructor comments ;
- (8) the performance evaluation ;
- (9) the name of the instructor ; and
- (10) the signature of the student.

IS:12.6.16.13.—(a) The alerting system shall allow the activating agency to alert the personnel and dispatch the aircraft fire-fighting vehicles. A secondary power supply or alternate system shall be provided as a contingency in the event of a primary system failure.

Communica-
tion and
Alerting
System.

(b) Each aircraft fire-fighting vehicle shall be provided with communication equipment capable of communicating with at least :

- (1) every other aircraft fire-fighting vehicle ;
- (2) the fire station exercising operational control as specified in the Aerodrome Emergency Response Plan ;
- (3) the air traffic services unit, or the aerodrome traffic frequency (ATF) ; and
- (4) an aircraft in a situation of emergency using an established discreet frequency.

(c) A communication system shall be provided to ensure the prompt and dependable transmission of alarms and other essential emergency information. Direct communication shall be provided between the activating agency or authority, the fire station, and responding vehicles.

(d) An alerting system for fire-fighting personnel, and or other aerodrome personnel shall be provided at a fire station and capable of activation from that station, or other designated agency.

B 2130

Wild Life
Planning
Manage-
ment—
Application.

IS:12.6.23.1.—(a) The wildlife hazards referred to in Regulation 12.6.23.1(a)(4), Regulation 12.6.23.3.3, Regulation 12.6.23.1 and Regulation 12.6.23.6(a) include, in the following descending order of priority with respect to risk, the following hazards :

- (1) Black kites ;
- (2) egrets ;
- (3) hawks ;
- (4) swallows ;
- (5) goats ;
- (6) dogs.

(b) The list of wildlife hazards referred to paragraph (a) is not intended to be exhaustive.

NOTE : The above list ranks wildlife hazards in descending order from the most hazardous to the least hazardous with respect to risk and as such, identifies the hazards that are of primary concern for the operator. All hazards contained in this list have the potential to cause an incident outlined in Regulation 12.6.23.1(a)(3) and Regulation 12.6.23.4.1(f)(2).

Risk
Analysis.

IS:12.6.23.3.—(a) The following constitutes the information to be collected by the operator of an airport pursuant to Regulation 12.6.23.3(a).

- (1) wildlife strike data ;

NOTE : When reporting a wildlife strike, the form specified by the Authority shall be used. Any information that the operator of an airport has that is outlined on that form should be included.

- (b) aircraft movement statistics ;
- (c) aircraft types ; and
- (d) ecological studies and wildlife inventories.

NOTE : An Airport Wildlife Management Plan template may be used to assist operators with the layout of risk assessments and management plans.

Airport
Wildlife
Management
Plan.

IS:12.6.23.4.—(a) Pursuant to Regulation 12.6.23.4.1, the operator shall, in developing an airport wildlife management plan, use the guidance material (Advisory Circular No. NCAA-AC-ARD012), that may be provided by the Authority.

(b) The operator shall submit the airport wildlife management plan in the form of a manual and in duplicate to the Authority.

Content of
Airport
Wildlife
Management
Plan.

IS:12.6.23.4.2. Pursuant to Regulations 12.6.23.4.1(a)(3), the requirements that shall be contained in an airport wildlife management plan are :

- (1) the identification of the species of any wildlife struck by aircraft ;

(2) the regular maintenance of wildlife management logs indicating management activities, environmental changes; wildlife interactions and animal remains identified by species ; and

(3) the evaluation of habitats, land uses and food sources, located at or near the airport, that might attract wildlife which may affect the safe operation of the airport including, if needed, arrangements for assessments, studies and monitoring.

IS:12.6.23.4.3. Pursuant to Regulation 12.6.23.4.3, the following constitutes the matters in which the operator shall provide training to persons having duties in respect of the airport wildlife management plan :

Training.

- (1) nature and extent of the wildlife management problem ;
- (2) regulations, standards and guidance material related to airport wildlife management programs ;
- (3) bird ecology and biology ;
- (4) bird identification, including the use of field guides ;
- (5) mammal ecology and biology ;
- (6) mammal identification, including the use of field guides ;
- (7) rare and endangered species and species of special concern, including related regulations and policies ;
- (8) habitat management ;
- (9) off-airport land use issues ;
- (10) active wildlife control measures ;
- (11) wildlife removal techniques ;
- (12) firearm safety ;
- (13) wildlife management planning ; and
- (14) development of awareness programs.

IS:12.6.23.4.4. Pursuant to Regulation 12.6.23.4.4, the communication and alerting procedure to be used in order to alert pilots as soon as possible of the wildlife hazards at the airport and associated risks may include :

Communication and Alerting Procedure.

- (1) where the aerodrome has air traffic services (ATS), bilateral radio communications or broadcast of airport advisories ;
- (2) if an immediate alert is required, direct radio contact can be used, when available ;
- (3) publication of a NOTAM in respect of the airport, whether in combination or not with the procedure referred to in paragraph (1) or (2).

B 2132

Information
to be
included in
Heliport
Manual.

IS:12.11.3.—

1.0. *General information including the following :*

- (a) name of heliport owner/operator, and address and telephone number[s] at which the owner/operator can be contacted at all times ;
- (b) purpose, and scope of the heliport manual ;
- (c) conditions for use of the heliport including operational limitation and restriction ;
- (d) available aeronautical information system and procedures for its promulgation ;
- (e) system for recording helicopter movements ;
- (f) obligations of the heliport operator.

2.0. *Particulars of Heliport Site.*

- (a) a plan of the heliport showing the main heliport facilities and heliport boundaries ;
- (b) a plan showing distance of heliport from the nearest city and aerodrome ;
- (c) particulars of the title of the heliport site.

3.0. *Particulars of the Heliport Required to be Reported to the Aeronautical Information Service (AIS).*

- (a) the name and type of the heliport ;
- (b) the location and distance of the heliport to the nearest town or aerodrome ;
- (c) the geographical co-ordinates of the heliport reference point and elevation determined by reference to the World Geodetic System 1984 (WGS - 84) reference datum ;
- (d) the heliport dimensions and related information (FATO/TLOF - type, dimension, slope, true bearing, designation number and bearing strength in tonnes) ;
- (e) the declared distances (take-off distance available ; rejected take-off distance available; and landing distance available) ;
- (f) information about visual aids systems (markings and lighting ; wind direction indicator ; VAGS ; HAPI) ;
- (g) the operational status of associated facilities services, navigational aids and heliport conditions.
- (h) details of heliport beacon (where provided).

4.0. *Heliport Operating Procedures and Safety Measures.*

4.1. *Heliport Administration*

Particulars of the helideck administration, including -

(a) the helideck organizational chart showing the name and position of key personnel ;

(b) the duty-list and responsibilities of key personnel, in particular the Heliport Manager and Heliport Duty Officer ; and

(c) the name and telephone number of the Heliport Manager.

4.2. *Heliport Emergency Plan*

Particulars of the heliport emergency plan, including the following :

(a) plans for dealing with emergencies occurring at the heliport ;

(b) details of test for equipment to be used in emergencies, including frequency of those tests; and details of exercise to test the emergency plan, including the frequency of those exercises.

4.3. *Visual Aids and Electrical Systems*

Particulars of procedures for the inspection and maintenance, aeronautical lights [including obstacle lights], signs, markers and electrical systems—

(a) arrangements for inspection ;

(b) reporting and recording of inspection findings ;

(c) correction of deficiencies ;

(d) arrangements for routine maintenance ; and

(e) arrangements secondary power supply.

4.4. *Heliport Reporting Procedures*

Particulars of procedures for notifying any changes to the infrastructure, facilities and operational procedures, including :

(a) arrangement for reporting changes ; and

(b) recording of changes.

4.5. *Access to Heliport Area*

Procedure for the prevention of unauthorized entry of person[s] into the heliport.

4.6. *Heliport Serviceability Inspections*

Particulars of procedures for the inspection of the heliport area and obstacle limitation surfaces ; visual aids, including :

(a) details of inspection intervals and times ;

B 2134

- (b) inspection checklist and logbook ;
- (c) reporting of inspection findings ; and
- (d) correction of unsafe conditions or deficiencies.

4.7. *Vehicle and Movement Control*

Where available, particulars of the procedure for the control of vehicular movements.

4.8. *Obstacle Control Measures*

Particulars setting out the procedures for :

- (a) controlling obstacles within the authority of owner ;
- (b) monitoring development within the obstacle limitation surfaces ; and
- (c) coordination for controlling new developments in vicinity of the heliport.

4.9. *Measures to Protect Navigational Aids.*

Particulars of the procedures for the protection of sites for radio navigational aids :

- (a) arrangements for controlling activities in vicinity of navaid installations ;
- (b) arrangements for ground maintenance of these installations ; and
- (c) arrangements for the installation of signs warning of radiation.

4.10. *Removal of Disabled Aircraft*

Particulars of the procedures for removing of a disabled aircraft, including :

- (a) role of heliport owner and holder of the aircraft certificate of registration ;
- (b) arrangements for notifying holder of the aircraft certificate of registration ; and
- (c) arrangements for obtaining equipment and personnel to remove aircraft.

4.11. *Handling of Hazardous Materials*

Particulars of the procedures for safe handling and storage of hazardous materials, including :

- (a) arrangements for special areas on the helideck for storage of inflammable liquids [including aviation fuel] and other hazardous material ; and
- (b) method for the delivery, storage, dispensing and handling of hazardous material.

4.12. *Helicopter Rescue and Fire Fighting.*

Particulars of the provision of :

- (a) fire fighting category ;
- (b) vehicles (where applicable) ;
- (c) extinguishing agents ;
- (d) Firefighting and rescue equipment.

4.13. *ATC Coordination Procedures*

Particulars of procedures for coordination with Air Traffic Services Unit[s], including -

- (a) procedures for arrivals ;
- (b) procedures for departures ; and
- (c) communication facilities provided.

4.14. *Maintenance of Helicopter Area*

Particulars of procedures for the inspection and maintenance of helicopter area :

- (a) arrangements for inspection ;
- (b) maintenance of paved areas ;
- (c) maintenance of markings ; and
- (d) maintenance of drainage.

5.0. *Safety Management System*

Particulars of procedures to ensure safety during helicopter operations:-

- (a) helicopter arrival procedures [including engine shut-down] ;
- (b) helicopter departing procedure [including engine-start] ;
- (c) fuelling procedures and safety precautions ;
- (d) protection from rotor downwash ;
- (e) apron sweeping and cleaning ;
- (f) arrangements for reporting incidents and accidents ; and
- (g) personnel safety procedures.

6.0. *Quality Systems*

Particulars of Quality Systems with emphasis on operations, maintenance and quality of service delivery to helicopter operators and helicopter users including :

- (i) Scale for weighing baggage, passengers and freight ;
- (ii) safety briefing room equipped with video machine, TV, tapes chairs etc. ;

B 2136

(iii) procedure for screening (hand held metal detector or walk through metal detector or x-ray machine) of passengers boarding or before entry into the helicopter, and

(iv) procedure for checking and carriage of dangerous goods.

7.0. *Environmental Protection*

Particulars of procedures for environmental protection :

(a) arrangement for preventing contamination of the land upon which they occupy, and any pollution that results from their activities is managed and cleaned up.

(b) arrangement for training the RFF personnel or assigned person to undertake a fuel spill response.

(c) arrangement for ensuring that fuelling is performed with precautions to prevent spill onto the soil or into drainage systems. Aircraft, vehicles or component washing is performed in designated areas, where run-off can be collected and diverted from spillage or leakage onto soil.

(d) arrangement for ensuring that all waste oils, fuels, chemicals and hazardous waste are stored, handled or disposed in accordance with environmental laws.

(e) arrangement for mitigation against the impact of noise pollution within residential areas around heliports vicinity.

8.0. *Control, Amendment and Distribution of Manual*

The procedures for control, amendment and distribution of the heliport manuals including :

(i) maintaining the accuracy of the Heliport Manual ;

(ii) ensuring the safe and efficient operation of aircraft at the Heliport ;
or

(iii) ensuring the safety of air navigation ;

(iv) ensuring each supervisory member of the Heliport operating staff including those employed by the operator's contractors or agents, where relevant, have copies of relevant sections of the Heliport Manual.