



CHAPTER 16

Operational Control

1.0 PURPOSE

- 1.1 This Chapter gives guidance to Flight operations inspectors on the evaluation of operations control. Inspectors should be thoroughly familiar with this information before reviewing those sections of an air operator's Operations Manual concerning operational control and before performing inspections of an air operator's operational control facilities or when conducting licensing of the flight operations officer or equivalently qualified persons.
- 1.2 Flight operations inspectors (FOI) should be thoroughly familiar with this material when preparing those portions of an air operator's operations specifications that relate to operational control.

2.0 REFERENCES

- 2.1 [Part 8 of the Nigeria Civil Aviation Regulations.](#)
- 2.2 [Part 9 of the Nigeria Civil Aviation Regulations.](#)
- 2.3 CHECKLIST: [CL:O-OPS004](#)
- 2.4 CHECKLIST: [CL:O-OPS020B](#)

3.0 BACKGROUND AND DEFINITIONS

- 3.1 The term "Operator", means a person, organization or enterprise engaged in or offering to engage in an aircraft operations and any person who causes or authorises the operation of aircraft in the capacity of the owner, lessee, or otherwise, whether with or without the control of the aircraft, who is deemed to be engaged in the operation of the aircraft within the meaning of this Order.
- 3.2 Regulation 8.12.1.2 of the Nigeria Civil Aviation Regulations requires that air operators exercise operational control of each flight in commercial air transport. Operational control means the exercise of authority over initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.
- 3.2.1 **Operational Control Functions - General.** Air operators conduct operational control by making those decisions and performing those actions on a daily basis that are necessary to operate flights safely and in compliance with the regulations. Operational control functions include crew and aircraft scheduling, accepting charter flights from the public, reviewing weather and notices to airmen (NOTAM), and flight planning. Air operators are responsible for collecting and disseminating information that is needed to plan and conduct flights safely, including information about en-route and terminal weather conditions, navigation, and aerodrome facilities. Flight operations officers should also have a knowledge of flight control policies and procedures for flight crew and other operations personnel to follow in the performance of their duties;



- 3.2.2 **Operational Control Systems - General.** Operational control systems vary with the kind of operation the operator is authorised to conduct, the complexity of the operations, the means of communication, and with the persons who are involved in preparing for and conducting flights under the air operator's system. Part 9 of the Nigeria Civil Aviation Regulations; provide for two general types of operational control systems applicable to passenger carrying flights conducted on a published schedule, and for all other flights. A Flight Supervision and Monitoring System is identified in Regulation 9.3.1.23 of the Nigeria Civil Aviation Regulations and a Flight Following System in Regulation IS 9.3.1.23 of the Nigeria Civil Aviation Regulations.
- 3.2.3 **Operator Oversight Responsibility.** The air operator's oversight responsibility includes ensuring that both its flight crew and operational control employees comply with published policies and procedures;
- 3.2.4 **Air operator's Operations Manual.** Regulation 9.3.1.2 of the Nigeria Civil Aviation Regulations require that air operators prepare and keep current a manual for the guidance of flight, ground and management personnel in the performance of their duties and responsibilities. Regulation 9.3.1.2 of the Nigeria Civil Aviation Regulations requires the air operator to include in his Operations Manual the duties and responsibilities of those persons to whom authority to exercise operational control has been delegated. Part 9 of the Nigeria Civil Aviation Regulations requires the air operator to provide the name of each manager responsible for flight operations (operational control) including a description of their duties and functions. The air operator's Operations Manual must contain guidance on the conditions that must be met before a flight may be initiated or continued, or under which a flight must be diverted or terminated.
- 3.2.5 **Specific Operational Functions.** Operational control includes, but is not limited to, the air operator's performance of the following functions:
- a) Ensuring that only those operations authorised by the Operations Specifications are conducted;
 - b) Ensuring that only crew members trained and qualified in accordance with the applicable regulations are assigned to conduct a flight;
 - c) Ensuring that crew members are in compliance with flight and duty time and rest requirements when departing on a flight;
 - d) Designating a PIC for each flight;
 - e) Providing the PIC and other personnel who perform operational control functions with access to the necessary information for the safe conduct of the flight (such as weather, NOTAMs, and aerodrome analysis);
 - f) Specifying the conditions under which a flight may be released (weather minima, flight planning, airworthiness of aircraft, aircraft loading, and fuel requirements);
 - g) Ensuring that each flight has complied with the conditions specified for release before it is allowed to depart;
 - h) Ensuring that when the conditions specified for a flight's release cannot be met, the flight is cancelled, delayed, re-routed or diverted;
 - i) Monitoring the progress of each flight and initiating timely actions when the flight cannot be completed as planned, including diverting or terminating a flight.
- 3.2.6 **Specific Operational Control Systems.** The operator must include, in his Operations Manual, policies and procedures appropriate to the flight release system used:

NOTE: *The air operator's system for exercising operational control may be described in the air operator's operations specifications. Most operational control systems are too complex to be adequately described in a single paragraph. In such cases, the air operator's system may be described in its Operations Manual, and the Inspector may reference the Operations Manual location of the system description in the air operator's operations specifications.*

- a) **Operational Control.** Regulation 8.12.1.2 of the Nigeria Civil Aviation Regulations requires that air operators conducting scheduled passenger carrying flights employ persons holding a Flight Operations Officer Licence issued in accordance with Part 2 of the Nigeria Civil Aviation Regulations or a person with equivalent qualification to exercise operational control of flights. Regulation 8.12.1.3 of the Nigeria Civil Aviation Regulations requires the person responsible for exercising operational control for an air operator to ensure the monitoring of the progress of the flight and provisions of information that may be necessary to safety;
- b) **Flight Release.** Regulation 8.12.1.2 of the Nigeria Civil Aviation Regulations places a shared responsibility for the operational control of charter flights with a qualified person exercising operational control responsibilities and the PIC. For purposes of this Order, employees exercising operational control during charter flights or other non-scheduled flights without passengers are termed flight followers. Inspectors should be aware that air operators might apply different job titles to these employees. Except for planned re-release operations, air operators are not required to be able to establish direct radio contact with charter flights while they are en-route. The flight follower must, however, concur with the PIC that a flight can be conducted safely before the flight may be initiated. This requirement necessitates a suitable means of communication between the flight follower and the PIC at each point of departure.

3.2.7 **Organizational Structure.** An operational control function may be centralised in one individual or diversified throughout an air operator's organization. In practice, it is not feasible for an individual to exercise operational control without assistance in any but the simplest of flight operations. Most air operators create specialised departments for crew scheduling, load control, and other functions. These functions may or may not be placed under the management and supervision of the "flight control" department. When these functions are delegated to specialised sections of the air operator's organization, the operator is responsible for the following:

- a) Establishing a means to ensure that all functions have been accomplished before a flight can be authorised to depart;
- b) Establish effective internal communications, operating procedures, and administrative controls to meet this obligation;
- c) Ensuring that these procedures are published in the air operator's Operations Manual.

3.2.8 **Complex Operations.** Practical and economic considerations may motivate air operators to install operational control systems that are more sophisticated than those required by the applicable regulation. Two air operators that conduct operations under the same regulation may require operational control systems of differing degrees of sophistication. For example, a charter operator carrying cargo may find a simple flight following system to be adequate.



A scheduled cargo operator conducting 100 flights a day to and from major terminal areas may find that a more sophisticated system is necessary to effectively control operations. The Authority may require, based on the complexity of operations, that an operator establishes a sophisticated operational control system as a condition of obtaining authorisation to conduct operations.

- a) **Authority Evaluation.** Inspectors must evaluate each air operator's operational control system to ensure that the air operator is in compliance with applicable regulations and that the system is effective and provides for an adequate level of safety in the operations actually being conducted;
- b) **Inadequate Operational Control.** If any inspector finds that an air operator's operational control system does not provide an adequate level of control to ensure safety he should carefully document the facts and report them to the Authority. The Inspector shall evaluate the report and, if required, negotiate an acceptable solution with the air operator, ensuring that the changes are incorporated. Should the air operator be unwilling to negotiate, the Inspector may find it necessary to recommend an amendment to the AOC in accordance with Regulation 1.1.9 of Part 9 of the Nigeria Civil Aviation Regulations.

3.2.9 **Operational Control by Contractors.** Air operators may contract for equipment and facilities and, under some circumstances, the services of operational control personnel.

- a) **Air Operators Conducting Scheduled Passenger Carrying Operations.** If an air operator conducting scheduled passenger carrying operations contracts for the service of a flight operations officer to exercise operational control, the air operator must maintain exclusive control over the duties, functions, and responsibilities of the contracted flight operations officer;
- b) **Air Operators Conducting Charter Operations.** These air operators may contract for control functions. The air operator is responsible for ensuring that the training and qualification of contract personnel is adequate, that contractor personnel are performing their duties diligently, and that the provisions of the air operator's manual are being complied with. The air operator must also have an effective means of disciplining contractor personnel when set guidance and policy is not complied with;
- c) **Operations Specifications Authorisation.** Any contract arrangements must be clearly and completely defined in the air operator's Operations Manual and authorised by the Authority in the air operator's Operations Specifications.



4.0 FLIGHT OPERATIONS OFFICER/FLIGHT DISPATCHER

- 4.1 A flight operations officer is a person who holds a flight operations officer licence issued by the Authority under Part 2 of the Nigeria Civil Aviation Regulations.
- 4.2 Air operators conducting scheduled passenger carrying operations must employ flight operations officers who are responsible for performing certain specified operational control functions.

5.0 FLIGHT INFORMATION

- 5.1 Air operators must supply or ensure that the Aeronautical information Package to include Maps, Charts, NOTAMs, Aeronautical Information Publication (AIP), Aeronautical Information Circular (AIC) and Aeronautical information Regulation and Control (AIRAC) necessary to plan, conduct, and control operations is available to operational control and flight crew personnel. Most of this data can be obtained through subscriptions to a government service or to a commercial aeronautical information and charting service.
- 5.2 Air operators should be expected to supplement these services if necessary, and in all cases are responsible for ensuring that the information used is accurate and complete. Air operators must also supply other data, such as NOTAMs, track messages, and aerodrome obstruction data, when applicable.
- 5.3 The air operator's system to obtain and distribute aerodrome data must be described in the Operations Specifications. The air operator's system may also be described in a section of the Operations Manual and referenced in the air operator's Operations Specifications. The air operator's Operations Manual must contain the guidance and procedures by which flight crew and operational control personnel can acquire and apply this information.
- 5.4 Aerodrome and Facilities. This information is obtained from the Aeronautical Information Publications (AIP) of the State from which the air operator conducts flight operations. Inspectors should ensure that air operators understand their requirement to make this information (for those aerodromes at which operations are conducted) available to their personnel.
- 5.5 **NOTAMs.** Air operators must provide NOTAMs to flight crew and operational control personnel for domestic and international operations in airspace covered by NOTAM systems:
- 5.5.1 **Inspector Responsibility.** Inspectors must ensure that the air operator's Operations Manual contains specific procedures for the acquisition and dissemination of local NOTAM information to flight crew and operational control personnel. Operational control personnel must be provided with a positive means to collect, analyse, and disseminate current NOTAM information to flight crew;
- 5.5.2 **Obtaining NOTAM Information.** An acceptable means for air operators to acquire this information is to task an authorised agent with collecting this information and reporting it to the air operator's operational control centre;

Note: Inspectors must ensure that the air operator's Operations Manual contains specific procedures for the acquisition, dissemination and cancellation of NOTAM information to flight crew and flight operations officers. Air operators should clearly understand that a means must be devised to collect en-route, destination, and alternate aerodrome NOTAMs that may impact operations.



- 5.5.3 **International NOTAMs.** International NOTAMs are transmitted electronically to those air operators that have arranged to receive them, and they are available, on a request/reply basis, for those offices with Aeronautical Fix Telecommunication (AFTN) circuits. International NOTAMs are also available from some commercial services;
- 5.5.4 **Operations Not Covered by NOTAMs.** Air operators may need to establish procedures or systems to develop or disseminate flight safety information concerning areas not covered by domestic or international NOTAMs, such as isolated aerodromes or offshore operations.
- 5.6 **Track Messages.** Messages containing the co-ordinates of routes to be followed on flexible track systems such as the North Atlantic organised track structure are transmitted approximately every 12 hours. Flight crew operating over these routes are required to have all current valid track coordinates available in the cockpit to verify flight plan co-ordinates, should an in-flight rerouting become necessary. Inspectors must ensure that an air operator's operational control personnel have this information for flight planning and flight monitoring purposes.
- 5.7 **Aircraft Performance and Aerodrome Obstacle Data.** Inspectors must ensure that operators of all types of aircraft comply with the performance requirements of Regulations 8.8.7 of the Nigeria Civil Aviation Regulations on Aircraft Operating And Performance Limitations before a flight departs. Air operators must obtain and use aerodrome obstacle data for takeoff performance calculations. Air operators of all categories of aircraft must comply with en-route obstacle clearance requirements, including contingency planning for engine failure.

6.0 WEATHER INFORMATION FOR CONTROL OF FLIGHT OPERATIONS

- 6.1 Inspectors must ensure that the system the operator uses to obtain and disseminate aeronautical weather data is either described in the air operator's Operations Specifications or that the system description, if in the air operator's Operations Manual instead, is referenced in the air operator's Operations Specifications.
- 6.2 **Weather for Flight Release.** The critical time period is the estimated time of arrival (ETA). Inspectors must ensure that air operators use all available weather reports and forecasts, as applicable, to cover this time period.
- 6.2.1 **Use of Forecasts for Long-Range Operations.** Clearly, current weather reports are of less value than forecasts for long range operations. A flight may be released to a destination that is currently below minima but that is forecast to be above minima at the ETA. The use of hourly reports to monitor trends is prudent and may be required;
- 6.2.2 **Release of Flights Based on Forecast Weather Information.** Air operators may be required to release flights with limited weather information. For example, a trans-Atlantic flight must depart several hours before the destination aerodrome opens and the first surface observations of the day are taken. An operator, flight operations officer, or a PIC who operates a flight under such conditions would be considered to be in compliance with the Regulations under the following conditions:

- a) Those weather reports and forecasts, which are available, have been obtained and used;
- b) Adequate contingency plans have been made to deal with the situation, should later reports be unfavourable.

6.2.3 **Use of Pilot Reports.** The term, "thoroughly familiar," includes being thoroughly familiar with all relevant pilot reports (PIREP).

6.3 **Conditional Phrases in Weather Forecasts.** Conditional phrases contained in the remarks section of a forecast (in addition to the information contained in the main body of the forecast) are controlling for purposes of a flight dispatch or flight release.

6.4 **Exemptions from Weather Requirements.** Many air operators have obtained exemptions to release flights to destinations at which the forecast remarks contain conditions below minima. Inspectors should be aware that these exemptions require those air operators to exercise a number of additional precautions. Typical precautions include the designation of a second alternate aerodrome and a requirement that the flight operations officer monitor and advise the flight crew of conditions while the flight is en-route. Inspectors of air operators using these exemptions should ensure that the air operator's Operations Manual contains adequate guidance.

7.0 FLIGHT PLANNING

7.1 Inspectors must ensure that air operators conduct pre-flight planning so that flights are conducted as follows: to the standards of navigational accuracy required in the airspace traversed, to meet regulatory fuel requirements, to satisfy ATC information and reporting requirements, and to ensure that flights are operated safely. The degree of sophistication and accuracy required in flight planning depends on the type of navigation conducted and the airspace traversed. Air operators may assign flight-planning duties to either flight crew or flight control personnel. It is a common and acceptable practice for air operators to contract for flight planning from specialised services. The operator, however, is responsible for the accuracy of any information the contractor uses and for the accuracy of the results.

7.2 **Flight Plans.** The term "flight plan" means a paper document or a file of electronic data prepared for purposes of flight planning, flight control, and navigation. Flight planning consists of selecting an appropriate aircraft cruise schedule and applying forecast wind, temperature, and aircraft performance data to a planned route to predict estimated time en-route (ETE) and estimated fuel consumption. The term "ATC flight plan" is used in this Order to mean the subset of information extracted from the flight plan, which is filed with ATC to obtain an ATC clearance.

7.3 **Computation and Verification.** A flight plan may be computed manually or with computer aids. In either case, inspectors must ensure that the air operator's Operations Manual contains the specified procedures, formats, and forms to be used. Inspectors shall ensure that air operators understand their responsibility for making sure that flight crew and operational control personnel verify the accuracy of planning. Since even computer generated flight plans are subject to input errors, use of a computer system that contains internal software to check for errors in flight plans is desirable. Inspectors shall also ensure that the air operator's Operations Manual contains adequate procedures for flight crew and operational control personnel to scrutinise all computer generated and all manually generated flight plans for accuracy.



7.4 Regulatory Requirements. Air operators are required by Regulations 2.1.8 and 6.2.20 of Part 8 of the Nigeria Civil Aviation Regulations to carry a flight plan to destination on all flights. Air operators typically require that flight crew record the flight progress on the flight plan or on other documents.

Note: *In international operations, the Authority may require such procedures as a condition of authorising extended over water navigation. When the flight crew is required to record the flight progress, the annotated flight plan becomes a record of the flight.*

7.5 Valid Track Co-ordinates. Flight crew must carry the valid track co-ordinates in the cockpit during flights over flexible track systems.

7.6 Navigation Methods and Flight Plans. Inspectors should keep in mind that the primary concerns in choosing navigation methods and procedures are the degree of precision required for the separation of air traffic and obstacle avoidance. Class I station reference navigation is VFR or IFR navigation within the standard service volume of International Civil Aviation Organization (ICAO), ground based, electronic NAVAIDs. Courses and distances are published on standard IFR charts or may be determined by plotting courses on an IFR or VFR chart. To be acceptable for Class I navigation, a simple flight plan should include at least the following:

7.6.1 Fix or intersection identifiers, segment distances, ETEs for each segment, and an estimate of fuel consumption for each segment (a segment or zone is the distance between two checkpoints);

7.6.2 A summation of distance, time, and fuel to show regulatory compliance;

7.6.3 Long Range, Class II Navigation. Long range, Class II navigation is navigation conducted beyond the operational service volume of standard ICAO NAVAIDs. Long range, Class II navigation normally requires specialised long range navigation systems such as Loran, inertial navigation systems (INS)/inertial reference systems (IRS), GPS, or Doppler. In some cases, dead reckoning (DR), pilotage, or celestial navigation may be used;

7.6.4 Long Range, Class II Flight Plan. An acceptable flight plan for long range, Class II navigation should contain the following elements:

- a) Waypoints (fixes for the portion of the route conducted by Class I navigation);
- b) The waypoint co-ordinates identifier (located next to the waypoint or on the line below);
- c) The course leaving the waypoint;
- d) Forecast segment wind, drift, or drift correction;
- e) Forecast temperature (or temperature deviation) and true air speed (TAS);
- f) Segment distances, estimated ground speed, and segment ETE;
- g) Estimate of fuel consumption for each segment;
- h) Indication of equal time points (ETPs), if they are used for compliance with engine-out fuel or oxygen requirements;
- i) A summation of distance, time, and fuel to indicate regulatory compliance;
- j) A means of predicting clear air turbulence, such as the height of the tropopause, maximum wind level, temperature gradients, or shear index.

- 7.6.5 **Organised Track Systems.** When operations are conducted over an organised track system, the flight plan co-ordinates must be checked against the track message. The air operator's Operations Manual must specify the individual responsible for the check and the procedures to be used;
- 7.6.6 Loran Systems. When Loran is used, appropriate NOTAMs must be checked to ensure that adequate signal coverage is available.
- 7.7 **Map reading.** Map reading is navigation conducted solely by reference to visually distinguishable checkpoints against a map. Map reading may be either Class I or Class II navigation but may only be approved over areas where checkpoints are readily distinguishable and in airspace where such operations are authorised. VFR navigation by map reading may only be conducted by air operators as follows:
- 7.7.1 Air operators may conduct VFR navigation only when and where specifically authorised to do so by the Operations Specifications;
- 7.7.2 Flight Planning for VFR Pilotage. VFR pilotage requires the use of current VFR navigation charts. Inspectors must evaluate an air operator's flight plan to ensure that it includes, but is not limited to, the following elements as applicable to the operation:
- a) Checkpoints, segment distances, ETEs for each segment, and an estimate of fuel consumption for each segment;
 - b) A summation of distance, time, and fuel planning to show regulatory compliance (departure point to destination, required reserve, and contingencies).
- 7.7.3 Flight Planning and Navigation for Class II, VFR Operations. Additional precautions may be necessary, depending on the area of operations. For example, in a polar or wilderness area, aircraft should always have adequate fuel to fly to the nearest fuelling point, along with a reserve of fuel. Helicopters operating offshore should at all times have at least enough fuel to reach land, and thereafter fly for an additional time as specified by the air operator's manual.
- 7.8 **Dead Reckoning (DR).** DR is navigation conducted solely by the pilot flying a calculated heading and estimated groundspeed without a means of obtaining a position. The pilot computes such headings by applying estimated wind information to the measured track. Navigation by DR is only acceptable under certain limited circumstances. For example, air operators may be approved by the Operations Specifications to conduct either IFR or VFR flights between the service volumes of two standard NAVAIDs on a direct course between the NAVAIDs. Such operations must be limited to periods of not more than 1 hour and to areas where ATC separation standards do not preclude such operations. Inspectors must evaluate other DR operations on a case by case basis.
- 7.9 Conflict Zones: operations over or near conflict zones may be dangerous. A detailed procedure must be established to ensure that it is safe to conduct such operations. Risk management (assessment and mitigations) must be conducted when intending to operate over or near conflict zones, in line with 8.6.2.2 (b) of the Regulations.



8.0 SELECTION OF ALTERNATE AERODROMES

- 8.1** A critical element of pre-flight planning is the selection of alternate, takeoff, en-route, and destination aerodromes. PICs and operational control personnel have a range of latitude to accommodate individual circumstances. This latitude must be carefully exercised. Air operators must provide specific direction and guidance to PICs and flight operations officers for the selection of takeoff, en-route, and destination alternate aerodromes.
- 8.2 Terrain.** Regulation 8.8.1.10 (a) of the Nigeria Civil Aviation Regulations requires the PIC to land at the "nearest suitable aerodrome" in case of an engine failure or shutdown.
- 8.3 Option for Aircraft with Three or More Engines.** Regulation 8.8.1.10 (b) of the Nigeria Civil Aviation Regulations; however, does allow a PIC operating an aircraft of three or more engines, to proceed to an aerodrome other than the nearest suitable available aerodrome, when this course of action is as safe as landing at the nearest suitable aerodrome. While these rules apply specifically to PICs, operational control personnel should be aware of, and be guided by, these requirements when selecting alternate aerodromes. Inspectors shall ensure that air operators and PICs take particular care in the selection of alternate aerodromes in the mountainous areas. Inspectors should ensure that the operator would be in compliance with all Regulations (in normal and engine out configurations) while en-route to the alternate aerodrome.
- 8.4 Weather NAVAIDs, and Aerodrome Conditions.** Flight operations officers, flight followers, and PICs must be aware of the distance to the alternate, the effect of weather, inoperative NAVAIDs, and aerodrome conditions when selecting alternate aerodromes.

9.0 LOAD CONTROL

- 9.1** When heavy payloads are carried aboard an aircraft, the fuel load may have to be limited. In addition, takeoff, en-route terrain clearance, and landing performance limitations limit the weight at which an aircraft can be released.
- 9.2 Loading Assumptions.** Operational control personnel must have either actual loading information or they must make assumptions about aircraft loading before they can release a flight. For flights released using loading assumptions, inspectors must ensure that the operator has established a means for ensuring that flights actually do depart at, or below, the maximum weight used for planning.
- 9.3 Operations Manual.** Inspectors must ensure that the air operator's Operations Manual contains information and procedures for the control of fuel load, payloads, takeoff weights, and centre of gravity (CG). The air operator's Operations Manual must clearly delineate the category of employee responsible for making these computations, adequate information and procedures for performing such calculations, and the procedures by which the flight crew and operational control personnel can ensure that these functions have been accomplished before the aircraft departs.



10.0 AIRWORTHINESS OF AIRCRAFT

10.1 Regulation 8.12.1.6 of the Nigeria Civil Aviation Regulations prohibits the dispatch or flight release of an aircraft unless it is airworthy and has all required equipment installed. Regulation 9.3.2.10 of the Nigeria Civil Aviation Regulations requires that before an aircraft can be operated it must have an airworthiness release (or appropriate logbook entry) and be prepared by a properly authorised person.

10.2 Compliance Minimum Equipment List (MEL) or Configuration Deviation List (CDL) Provisions. When an aircraft is released in accordance with MEL or CDL provisions, the airoperator's procedures, policies, instructions, and controls for the use of the MEL or CDL must ensure that -

10.2.1 There are no known conditions that would make the aircraft un-airworthy, and;

10.2.2 The aircraft is in condition for safe operation.

NOTE: Use of the MEL or CDL does not require a new airworthiness release. Under certain circumstances, however, approved company procedures may require the issuance of a Certificate of Release to Service. In any event, inspectors shall ensure that air operators follow the approved procedures.

10.3 MEL or CDL Limitations in Flight Dispatch or Flight Releases. When MEL or CDL restrictions impose aircraft performance or weight limitations, the flight operations officer or the person exercising operational control must be notified of these limitations before the flight is dispatched or released. It is not unusual for additional discrepancies to arise after a release has been prepared and transmitted. When a decision has been reached to operate the aircraft with an additional deferred discrepancy after the release has been prepared, the operator must have procedures for notifying the flight operations officer or the individual exercising operational control. If the flight cannot be operated as originally released, a new release must be prepared or the original release must be amended.

10.4 Discrepancies after Departure. A flight is considered to have departed when it moves under its own power (forward or backward) for purposes of flight. After this time, any discrepancy, which arises, must be handled according to the flight manual. If the flight manual has procedures for that particular discrepancy, which allow for the continuation of the flight, and the PIC determines that the flight can safely depart using those procedures then the flight may continue. If the flight manual does not permit continuation of the flight, or if the PIC determines that the flight cannot safely depart, the discrepancy must be entered in the technical log of the aircraft in accordance with Regulation 3.2.8 of Part 9 of the Nigeria Civil Aviation Regulations and maintenance action must be taken before the aircraft takes off. A new or amended flight release is required when the flight cannot be operated as originally planned. For example, the antiskid could fail during the taxi for takeoff. If the flight manual contains procedures for adjusting performance computations, which indicate that the flight can operate within the required limits at the departure point, destination, and alternate aerodrome, the flight could continue. Conversely, if the flight manual does not contain any such procedures, the flight must return for maintenance action.



11.0 CREW QUALIFICATION AND CREW FLIGHT TIME LIMITATIONS AND REST

REQUIREMENTS

- 11.1 The operator is responsible for assigning specific personnel to operate each flight, including the designation of a PIC. Crew members and the operator are jointly responsible for ensuring that crew members are qualified in accordance with the regulations (including special aerodrome qualifications) and are in compliance with crew flight time limitations and rest requirements before the flight departs.
- 11.2 Air operators may delegate these responsibilities to departments other than the operational control department but must establish procedures by which operational control personnel can verify that these requirements have been accomplished.

12.0 CREW MEDICAL QUALIFICATION AND PROCEDURES DURING TEMPORARY MEDICAL DEFICIENCY

- 12.1 In order to maintain the highest level of safety required, flight crew members must not fly under conditions that would make them unable to meet the requirements for their current medical certificate. This decision should not be influenced by fear of company reprisals.
- 12.2 Inspector's should encourage their assigned air operators to have established sick leave policies and procedures, especially those concerning the release of flight crew members from duty when they develop sudden temporary illnesses, such as colds, flu, or fevers. These policies and procedures should not discourage flight crew members from taking sick leave when they are ill.

13.0 FLIGHT SUPERVISION AND MONITORING SYSTEMS (SCHEDULED AIR OPERATIONS)

13.1 General

- 13.1.1 Air operators conducting scheduled operations must have an adequate system approved by the Authority for proper dispatch and monitoring of the progress of scheduled flights. This system shall use qualified flight operations officer or equivalently qualified persons to directly control flight operations. A pilot in command (PIC) may not initiate or continue a flight unless both the PIC and the flight operations officer agree that the flight can be conducted safely as planned under the existing and forecast conditions. Once a flight is initiated, the flight operations officer must continually monitor the flight's progress and inform the PIC of conditions that could affect the safe operation of that flight.
- 13.1.2 **Signature on a Flight Release.** Regulations 8.6.2.20 and 8.12.1.4 (a) (3) of the Nigeria Civil Aviation Regulations require that both the flight operations officer and the PIC sign the dispatch copy of the flight release. The flight operations officer and PIC's signatures certify that, in the judgement of each, the flight can be made safely as planned. Some further guidance follows for inspectors to use regarding signatures on dispatch releases:
- a) The conditions under which a flight is dispatched/ released may make it impractical for both the flight operations officer and the PIC to sign on the same form. For example, the operator may maintain a centralised dispatch centre and transmit dispatch releases to

each point of departure rather than maintain individual dispatch facilities at each aerodrome. Air operators may establish procedures that comply with the intent of the rule, but accommodate the necessities of contemporary operations. One acceptable practice is for a flight operations officer to sign a duty roster at the beginning of the flight operations officer shift, thus indicating the time the flight operations officer came on duty and the desk or geographic area the flight operations officer is working. The flight operations officer name and a date time group printed on each dispatch/flight release may be considered the flight operations officer signature in combination with the duty roster. Another acceptable practice is for the flight operations officer to sign and retain for the record a copy of each dispatch/flight release, which is transmitted;

- b) Inspectors, air operators, and flight operations officers should be aware of the significance of an individual's signature under law, being that the individual who signs has consented to be bound by, and held responsible for, the act;
- c) A flight operations officer may conduct an in-flight re-release by recording the re-release message on oral tape or in writing. A system of appending the flight operations officer signature, such as that described in previous subparagraph (a), may be used. The PIC may accept an in-flight re-release over the radio by reading back the dispatch release message, recording the message in writing (including the flight operations officer's name), noting the date and time, and signing the entry. The preferred procedure is for the message to be copied on a designated master flight plan. These same procedures may be used for releases delivered over the telephone. The signed dispatch releases, duty rosters, and the master flight plan are company records that must be retained.

13.1.3 Flight Preparation. Before dispatching any flight, a flight operations officer must be thoroughly familiar with the reported weather conditions and the forecast weather conditions (including adverse weather) and the status of communications, navigation, and aerodrome facilities. Regulation 8.12.1.4 of the Nigeria Civil Aviation Regulations require that the flight operations officer assist the PIC in flight preparation and provide the PIC with information on each of these items prior to release:

- a) The flight preparation assistance provided to the PIC by the flight operations officer may be accomplished verbally or in writing. In the latter case, communications facilities must be available for the flight operations officer and the PIC to communicate directly by voice if direct communication is required or desired;
- b) The intent of Regulation 8.12.1.4 of the Nigeria Civil Aviation Regulations is that the flight operations officer and the PIC have adequate and identical information for planning. The PIC and the flight operations officer must be thoroughly familiar with and consider all aspects of the situation. For example, inoperative navigation aids and shortened runways as well as weather conditions can affect the selection of alternate aerodromes. For this reason the briefing by the flight operations officer is not optional for either the flight operations officer or the PIC under these rules.

13.1.4 Flight Monitoring. A flight operations officer must monitor the progress of each flight under that flight operations officer control until the flight has landed, passed beyond the flight operations officer area of control, or until the flight operations officer is properly relieved by another. Flight monitoring, as a minimum, must consist of the monitoring of each flight's fuel state, flight time remaining,



destination and alternate aerodrome weather trends, en-route winds and weather (including pilot reports), and the status of aerodrome and navigational facilities.

- a) Regulation 8.12.1.3, 8.12.1.7 and 8.12.1.9 of the Nigeria Civil Aviation Regulations require that the flight operations officer report to the PIC any additional information that could affect the safety of the flight. This information may be delivered by voice message, air ground passive communication systems such as aircraft communication addressing and reporting system (ACARS) or any other means.;
- b) Regulation 8.12.1.2 of the Nigeria Civil Aviation Regulations requires that the flight operations officer ensure that flight locating and flight following procedures are followed.

13.1.5 **Operations Manual.** Inspectors must ensure that the air operator's Operations Manual contains policies and procedures for releasing flights and subsequent in-flight monitoring. Regulation 9.3.1.2 of the Nigeria Civil Aviation Regulations requires that the Operations Manual or applicable parts of it be issued to flight operations officer during the performance of their duties. Inspectors must ensure that the air operator's Operations Manual includes the information that follows.

- a) The air operator's Operations Manual must contain flight crew reporting requirements and the actions that flight operations officer should take if reports from the flight crew are not received;
- b) Once initiated, a flight must continue to destination as planned and within the conditions of the dispatch release. A PIC shares in the responsibility for operational control of the aircraft and has the situational authority to make decisions regarding operational control issues in-flight. According to regulation of Part 8 of the Nigeria Civil Aviation Regulations, where the decision of the PIC differs from that recommended by the flight operations officer, the flight operations officer shall make a record of the associated facts;
- (c) ATC frequently delays, reroutes, or assigns an altitude to flights other than those planned by the operator. The ATC system requires this flexibility to reroute traffic flow around adverse weather and to function effectively. The air operator's policies and procedures for operational control should accommodate these demands while maintaining the duality of responsibility shared by the flight operations officer and the PIC. One acceptable means air operators may use to comply with the regulatory requirement is to publish notification requirements in the Operations Manual for flight crew to follow in these circumstances. For example, the operator might specify maximum amounts that the ETE, assigned altitude, estimated fuel remaining when overhead destination and distance from planned course may deviate, without reporting to the flight operations officer and obtaining an amended release. The operator may also place remarks on the dispatch release to alert the PIC to the fact that a routing has been chosen for a specific reason and give instructions to contact the flight operations officer if ATC needs to reroute the flight.

13.2 Facilities and Staffing

13.2.1 Regulation 9.3.1.23 of the Nigeria Civil Aviation Regulations requires that each scheduled operator provide enough dispatch centres and qualified flight operations officer to ensure adequate

13.2.2 **Facilities.** Regulation 9.3.1.23 of the Nigeria Civil Aviation Regulations also requires that each scheduled operator provide enough dispatch centres for adequate control of the operations conducted.

- a) Air operators have wide latitude in meeting this requirement. With modern communications, many air operators exercise world-wide operational control from a single centre. Any number and placement of centres is acceptable, provided the operator can show that organizational and communications arrangements are effective;
- b) Many air operators have chosen to automate some dispatch duties and routines. A few air operators have introduced a high degree of automation. Many functions, which were previously performed manually by human beings, are now handled automatically by machine. For example, flight routes are automatically generated and flight plans are filed by computer. While these systems may be labour saving, they introduce special problems and specific hazards. Inspectors must ensure that the operator has designed adequate safeguards into the system. For example, the operator must be able to ensure that a flight plan with a routing identical to the one filed with ATC is delivered to the PIC.

13.2.3 **Staffing.** Regulation 9.3.1.23 of the Nigeria Civil Aviation Regulations also requires that scheduled air operators provide enough qualified flight operations officers to ensure the adequate operational control of all flights as follows:

- a) Regulation 8.12.1.2 of the Nigeria Civil Aviation Regulations requires that each flight operations officer is currently qualified with the air operator for the operation. His authorisation includes testing by the air operator to ensure that proficiency is maintained. This requirement applies to all flight operations officers the operator assigns to revenue flights (including the management personnel who occasionally work a position to relieve personnel), and to those flight operations officers who trade assignments for personal reasons. Inspectors must ensure that air operators have established a means of qualification to satisfy this rule;
- b) The flight operations officers commonly dispatch and monitor flights simultaneously. Inspectors must ensure that air operators provide enough flight operations officers' personnel to fully accomplish both tasks. Inspectors should ensure that the air operator's flight operations officers are not neglecting flight monitoring duties due to the pressure of their duties for originating flights;
- c) The time required for a flight operations officer to prepare a dispatch release or to monitor the progress of a flight varies according to the geographical area, the complexity of the operation, and the degree to which the process is automated. A flight operations officer



employed by a small operator may do all of these tasks manually without assistance and may take, several hours to dispatch a single flight. On the other hand, a flight operations officer for a major air carrier may be able to adequately dispatch a flight in a few minutes by using a computerised system;

- d) With all air operators, workloads tend to be cyclical with peaks and troughs. Air operators should continually monitor flight operations officers' workloads at peak periods to ensure that the flight operations officer is not overloaded. Operators should avoid overloading the flight operations officer with assignments of unrelated tasks during peak activity periods;
- e) The operator must have adequate contingency plans for dealing with foreseeable non-routine operations. For example, during periods of poor weather or in the hurricane season when major storms may be threatening the route, a flight operations officer workload can increase to several times the routine level. One acceptable means of dealing with this problem is for the operator to add more flight operations officers during periods of non-routine operations;
- f) Air operators conducting "hub operations" have special problems. For example, if weather conditions unexpectedly restrict operations or close a hub while flights are inbound, the operator must demonstrate the capability to communicate with, and effectively control, a large number of flights in a short period of time;
- g) Inspectors shall ensure that air operators using automated systems have published procedures for maintaining operational control after an unexpected loss of an automated system. These procedures should be published in the air operator's Operations Manual.

13.3 Flight Operations Officer/Flight Dispatcher Duty Time Limitations

13.3.1 Inspectors must ensure that air operators place limitations on flight operations officer's duty time, except in cases of circumstances or emergency conditions that are beyond the control of the operator.

13.3.2 The following standards should be sought:

- a) A flight operations officer should not be scheduled for more than 10 consecutive hours of duty;
- b) Each flight operations officer must be relieved of all duty for at least 24 consecutive hours during any 7 consecutive days;
- c) A flight operations officer shift must be scheduled to begin at a time that allows the flight operations officer to become thoroughly familiar with existing and anticipated weather conditions along the route before dispatching any flight. The flight operations officer must remain on duty until each flight under the flight operations officer control has either landed, or gone beyond the flight operations officer jurisdiction, or until the flight operations officer is relieved by another qualified flight operations officer. Then requirements necessitate a change over procedure between the oncoming flight operations officer and the flight operations officer being relieved.



13.4 Weather Requirements for Dispatch

- 13.4.1 Inspectors must be informed about the weather requirements for the dispatch of flights under Part 8 of the Nigeria Civil Aviation Regulations.
- 13.4.2 **Dispatch and Flight Release under VFR.** Regulation 8.12.1.10 of the Nigeria Civil Aviation Regulations prohibit a flight operations officer from authorising a VFR flight unless the weather reports and forecasts indicate that the meteorological conditions along the route to be flown under VFR will, at the appropriate time, allow VFR, and the flight can reasonably be expected to be completed as specified in the release under VFR.
- 13.4.3 **Takeoff Alternate Aerodromes.** Regulation 8.6.2.9 of the Nigeria Civil Aviation Regulations prohibits a flight operations officer from authorising a flight under IFR without a suitable alternate specified in the flight release if it would not be possible to return to the aerodrome of departure. In addition, each alternate specified shall be located within one hour's flight time for two engine aircraft, unless the aircraft and crew are authorised for ETOPS, in which case the takeoff alternate specified shall be located within two hours or the approved ETOPS diversion time whichever is less. For three or four engine aircraft, the takeoff alternate shall be located within two hours flight time
- 13.4.4 **Destination Weather-IFR Operations.** Regulation 8.6.2.6 of the Nigeria Civil Aviation Regulations prohibits a flight operations officer from authorising a flight under IFR unless available weather information indicates that the weather conditions at the aerodrome of intended landing, and if required, at least one suitable alternate at the ETA, will be at or above the minimum ceiling and visibility values for the standard instrument approach procedure to be used, that would allow a VMC descent to the aerodrome.

Note: For commercial air transport IFR flight planning, a partial exemption is granted to the effect that the weather at the destination does not have to be at or above the approach minima to release and commence flight, as long as the designated aerodrome meets the IFR weather selection criteria.

- 13.4.5 **Alternate Weather.** Regulations 8.6.2.5 and 8.6.2.6 of the Nigeria Civil Aviation Regulations prohibits a flight operations officer from authorising a flight under IFR in an aircraft without at least one destination alternate aerodrome listed in the flight plan, unless there is a standard instrument approach procedure prescribed for the aerodrome of intended landing by the jurisdictional authorities.
- 13.4.6 **IFR Alternate Aerodrome Selection Criteria.** If alternate minima are published, Regulation 8.6.2.6 of the Nigeria Civil Aviation Regulations prohibits a flight operations officer from authorising an alternate aerodrome in an IFR flight plan unless the most available forecast indicates that the meteorological conditions at the alternate, at the ETA, will be at or above those published alternate minima. If alternate minima are not published and there is no prohibition against using the aerodrome as an IFR planning alternate, each flight operations officer shall ensure that the meteorological conditions at the alternate, at the ETA, will be at or above a ceiling of at least 600 feet and visibility of not less than 3 km. for a precision approach; or, for a non-precision approach procedure, a ceiling of at least 800 feet and visibility of not less than 3 km..



13.5 Fuel Supply

13.5.1 Inspectors need to be aware of the fuel requirements for dispatch under Part 8 of the Nigeria Civil Aviation Regulations. The fuel planning provisions of Part 8 of the Nigeria Civil Aviation Regulations apply to all flights - whether turbojet, turbo propeller, or reciprocating powered.

13.5.2 **Required Fuel Supply.** A flight operations officer shall not authorise a flight and a flight may not take off unless, considering winds and forecast weather conditions, the flight meets all the requirements of Regulation 8.6.2.13 of the Nigeria Civil Aviation Regulations for that particular flight. Thus:

- a)
 - (i) Minimum Fuel Supply for VFR Flights. Regulation 8.6.2.14 of the Nigeria Civil Aviation Regulations prohibits a flight operations officer from authorising a flight in an aeroplane under VFR unless, considering wind and forecast weather conditions, there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed for at least 30 minutes thereafter for flights during the day; and for flights at night, for at least 45 minutes thereafter, and for international flights, for at least an additional 15% of the total flight time calculated for cruise flight;
 - (ii) Minimum Fuel Supply for VFR Flights- Helicopters: To fly to the heliport to which the flight is planned, to fly thereafter for a period of 20 minutes at best-range speed plus 10 per cent of the planned flight time; and to have an additional amount of fuel, sufficient to provide for the increased consumption on the occurrence of potential contingencies
- b)
 - (i) Minimum Fuel Supply for IFR Flights. Regulation 8.6.2.15 of the Nigeria Civil Aviation Regulations prohibits a flight operations officer from authorising an IFR flight unless there is enough fuel supply, considering weather reports and forecasts to fly from the first point of intended landing, and from that aerodrome to the planned alternate aerodrome, if required, and to fly thereafter at normal cruising speed for 45 minutes if in a propeller driven aeroplane, and for 30 minutes if in a turbojet or turbofan aeroplane. The airoperator's Operations Manual should contain a clear statement of this point for pilots, flight operations officer, and load planners. An additional increment of fuel for start up, taxi, and pre-departure delays must be included in the fuel load on board the aircraft at engine start.
 - (ii) Minimum Fuel Supply for IFR Flights- Helicopters: To fly to the alternate specified in the flight plan; and then to fly for 30 minutes at holding speed at 450 m (1 500 ft) above the alternate under standard temperature conditions, and approach and land; and to have an additional amount of fuel sufficient to provide for the increased consumption on the occurrence of potential contingencies.

13.6 Original Dispatch

13.6.1 A scheduled flight should not depart from the point of origin unless a dispatch release contains specific authorisation for the flight between specified points. The dispatch release may be for a single flight or for a series of flights with intermediate stops.

13.6.2 **Flight Release Elements.** Inspectors must ensure that air operators require that the dispatch/flight release be recorded in writing and contain at least the following information as required by Regulation 8.12.1.5 of the Nigeria Civil Aviation Regulations:

- a) Aircraft identification number;
- b) Flight number;
- c) Departure aerodrome, destination aerodromes, alternate aerodromes and route;
- d) The type of operation (IFR or VFR);
- e) Minimum fuel quantity required by regulation at the start of each takeoff (does not include taxi fuel).

13.6.3 **Flight Release Attachments.** Regulations 8.12.1.5 and 8.12.1.8 of the Nigeria Civil Aviation Regulations require that a dispatch/flight release contain or have attached: available weather reports, weather forecasts (or a combination thereof) for the destination aerodrome, and alternate aerodromes that are the latest available at the time the release is signed by the pilot.

- a) The term "available" report includes pilot reports;
- b) Any additional weather reports or forecasts that the PIC considers necessary or desirable must be included;
- c) The operator must establish procedures to ensure, when a flight has been dispatched released but is unable to depart as scheduled, that the weather information is updated and is the latest available at the time of actual departure (takeoff). The operator may include procedures in the Operations Manual to have the flight operations officer forward to the flight crew any new weather information which may be operationally significant as soon as practical after the aircraft departs;
- d) To ensure that the weather information is updated, the flight operations officer must prepare a new dispatch when a flight takes off and then returns to the point of departure.

13.6.4 **Flight Release - Additional Information and Conditions.** While a dispatch/flight release must contain the information specified in previous subparagraphs 13.6.2 and 13.6.3, it is not limited to that information. Additional information and conditions should be placed on or attached to the release. For example, when an in-flight re-release is planned, a statement to that effect should appear on the release. When a flight is planned under conditions that could limit the PIC's discretion, those conditions should be indicated. For example, when a flight can be safely conducted over the most direct route between two points but not over possible alternate routings that ATC might assign, that statement should be noted on the release. The operator's approved system under Regulation 9.3.1.21 of the Nigeria Civil Aviation Regulations for obtaining weather information should include the requirement under Regulation 8.12.1.8 of the Nigeria Civil Aviation Regulations that the flight operations officer communicate to the PIC all information, including adverse weather phenomena, that may affect safety of flight on each route to be flown and aerodrome to be used.



- 13.6.5 **Flight Release Time Limits.** When an aircraft is released for a series of scheduled flights, the aircraft may only remain on the ground for 1 hour at the intermediate stop. If the ground time exceeds 1 hour, a new dispatch release is required regardless of the scheduled ground time.
- 13.6.6 **Destination.** A flight operations officer may designate any aerodrome that is listed in the Operations Specifications for the type of aircraft, as the destination for the purpose of the original dispatch.
- 13.6.7 **Aerodromes not listed in the Operations Specifications.** A flight operations officer may not release a flight from an aerodrome that is not listed in the Operations Specifications, unless the following criteria are met:
- a) The aerodrome and related facilities are adequate for the operation of the aircraft ;
 - b) The operation is in compliance with the limitations of the flight manual and Operations Specifications;
 - c) The aircraft has been dispatched/released according to those rules applicable to dispatch from an approved aerodrome;
 - d) The weather conditions for takeoff are equal to or exceed that prescribed in regulations. Where minima are not prescribed for the aerodrome, one of the following is required: a ceiling of 800 feet and 3km visibility, a ceiling of 900 feet and 2km and 1km visibility, or a ceiling of 1,000 feet and 2km visibility.

13.7 Amendment of a Dispatch/Flight Release

- 13.7.1 In the absence of an emergency, a flight may only proceed to the destination to which it was originally dispatched/ released, and if the flight is unable to land at the original destination, it may only proceed to the designated alternate aerodrome. Regulation 8.12.1.13(a) of the Nigeria Civil Aviation Regulations allows, however, for a dispatch release to be amended while the flight is en-route. An amendment or re-release en route must be recorded. An amendment may become necessary or desirable because the conditions under which the flight was released have changed (unplanned re-release) or because it may have been planned before departure (a pre-planned, re-release).
- 13.7.2 **Destination Weather Requirements** While En-route. A commercial air transport flight is not prohibited from continuing toward a destination which has gone below landing minima or one which is forecast to be below landing minima at the ETA by a forecast issued after the flight has departed. For example, there may be enough fuel on board to hold overhead the destination until the weather is forecast to improve. Regulation 8.12.1.13(c) of the Nigeria Civil Aviation Regulations does, however, prohibit the PIC from continuing to the destination if the weather reports and forecasts indicate changes which would render that aerodrome unsuitable for the original flight release. Inspectors should ensure that the air operator's Operations Manual provides guidance to both PICs and flight operations officer for dealing with these circumstances.

13.7.3 **Alternate Weather Requirements** While En-route. In accordance with Regulation 8.6.2.7 of the Nigeria Civil Aviation Regulations an alternate aerodrome (not having published alternate minima) may be named which is below alternate minima at the time of release, but which is forecast to be at or above alternate minima at the ETA. Inspectors should ensure that the air operator's Operations Manual contains specific procedures, however, for notifying the PIC and monitoring the weather at the alternate aerodrome when the selected alternate aerodrome is below minima at departure. These procedures may require the designation of a second alternate aerodrome or that contingency fuel must be carried on the flight.

- a) Conditions other than ceiling and visibility can affect minima, such as navigational aids, runway lighting, and snow removal operations. Flight operations officer must monitor these factors at designated alternate aerodromes as well as ceiling and visibility;
- b) When weather conditions permit many air operators release flights without an alternate aerodrome. In some instances while the flight is en-route, the destination weather may deteriorate to below what was used to release the flight and to the point that an alternate aerodrome would have been required. The air operator's Operations Manual should contain direction and guidance to PICs and flight operations officers on how to manage such a situation;
- c) The dispatch release may be amended while the aircraft is en-route to include any aerodrome as an alternate that has the following:
 - (i) Authorisation for that type of aircraft;
 - (ii) Is within the fuel range of the aircraft;
 - (iii) Alternate aerodrome landing weather minima.

13.7.4 **Requirements to Amend a Dispatch Release.** Before a destination aerodrome or an alternate aerodrome may be changed, the following requirements must be met:

- a) The PIC and the flight operations officer must jointly approve the change;
- b) The flight operations officer must be thoroughly familiar with reported and forecast weather conditions (including adverse weather) and the status of communications, navigation, and aerodrome facilities;
- c) The flight operations officer must provide the information specified in previous subparagraph 13.7.2 to the PIC;
- d) The destination and alternate aerodromes specified in the amended release must be forecast to be above the weather minima required in the air operator's Operations Specifications for the destination and alternate aerodromes, respectively, at the ETA;
- e) The aircraft must have sufficient fuel on board at the time and point that the release was amended to complete the flight in compliance with the applicable fuel requirements (see Regulation 8.12.1.11 of the Nigeria Civil Aviation Regulations);
- f) The transmission of the re-dispatch message must be recorded by the flight operations officer, and its receipt must be recorded by the PIC (see Regulation 8.12.1.13 of the Nigeria Civil Aviation Regulations).



13.7.5 **Planned Re-Release.** Planned re-release operations are conducted to conserve fuel to complete flights at ranges which would otherwise be beyond the aircraft's fuel capacity, and to solve weather related operational problems. A scheduled operator may only conduct planned re-dispatch in extended over water operations when authorised by the air operator's Operations Specifications. Paragraph 14.0 of this Order contains a discussion of planned re-release procedures.

13.8 Load Manifests

13.8.1 Before each flight, a load manifest must be completed as follows:

- (a) **Content of the Manifest.** A scheduled operator must prepare a load manifest in accordance with Regulation 8.6.2.16 (a) (2) of the Nigeria Civil Aviation Regulations, containing the following:
 - (i) Distribution of the load;
 - (ii) Centre of gravity;
 - (iii) Takeoff and landing weights;
 - (iv) Compliance with maximum operating weight limitations and performance analysis.

- (b) **Disposition of Flight Records.** Regulation 8.6.2.16 (c) of the Nigeria Civil Aviation Regulations requires that the PIC carry the following flight records to the destination aerodrome:
 - (i) Load manifest;
 - (ii) Dispatch/Flight release (including required attachments);
 - (iii) Flight plan: The operator must retain these flight records for a period of time acceptable to the Authority. The Inspector must ensure that the air operator's storage methods and location provide reasonable access for inspections

13.9 En-Route Terrain Clearance

13.9.1 Part VII on Aircraft Operating And Performance Limitations of Part 8 of the Nigeria Civil Aviation Regulations contains limitations on weights at which aircraft may be dispatched/released due to terrain clearance requirements. Inspectors should be aware that to meet the limitations of this Part, air operators may be required to limit takeoff weights or list en-route alternate aerodromes on the dispatch release.

14.0 FLIGHT FOLLOWING SYSTEMS (CHARTER FLIGHT OPERATIONS)

14.1 General

14.1.1 This section contains information for inspectors about flight following/flight release systems and about the release of flights under the requirements applicable to charter flight operations.

14.1.2 **Flight Followers.** Under Regulation 8.12.1.3 of the Nigeria Civil Aviation Regulations a qualified person shall be designated by the air operator to exercise the functions and responsibilities for operational control of each flight in commercial air transport. For flights other than passenger flights conducted on a published schedule, the qualified person

exercising operational control responsibilities shall be available for consultation prior to, during and immediately following the flight operation.

- (a) Part 9 of the Nigeria Civil Aviation Regulations requires that the name of each person responsible for ground operations (flight following) be listed in the air operator's Operations Manual;
- (b) Charter air operators may contract with other air operators or organizations to provide certain elements of an operational control system, such as communications and flight following. In such a case, the name of each employee of the contracting organization authorised to provide such elements of operational control must be listed in the air operator's Operations Manual.

14.1.3 **Release Authority.** PICs are responsible for pre-flight planning and for the safe conduct of the flight and the flight follower have determined that the flight can be safely completed. The flight follower and the PIC share in the responsibility for operational control of each flight in commercial air transport. The flight follower is required to be available to the PIC for consultation during all phases of a flight. Where a decision of the PIC differs from that recommended by the qualified person exercising operational control authority (the flight follower) that person is required to make a record of the associated facts. Inspectors must ensure that the air operator's Operations Manual contains specific procedures to ensure that the operator, the PICs, and the flight followers are in compliance with this requirement. Unless the PIC decides it is unsafe to do so, the PIC must conduct the flight in accordance with the flight release.

14.1.4 **Flight Monitoring.** The air operator's director of operations is responsible for monitoring the progress of each flight from its point of origin to its arrival at the destination, including its arrival and departure from intermediate stops. Regulations 8.12.1.2(d) and 8.12.1.4 of the Nigeria Civil Aviation Regulations provide the PIC with authority to delay, divert, or cancel a flight when, in the opinion of the PIC, the flight cannot be operated safely as scheduled. The flight follower must actively review records of the conditions and recommendations surrounding each flight to comply with this requirement. In the case of an emergency arising during flight, known to a flight follower, the PIC must be contacted and advised of the situation. The PIC's decision on a course of action must be obtained and the PIC's decision recorded. If a flight follower cannot contact the PIC, the flight follower shall declare an emergency and take any action the flight follower considers to be necessary in the circumstances.

14.1.5 **Demonstration of Flight Follower Competence.** Regulation 9.3.1.23 of the Nigeria Civil Aviation Regulations requires that a charter operator show that each individual authorised to conduct operational control (i.e., a flight follower) is competent and able to perform the required duties. This rule applies to both employees of the operator and to contract personnel the operator authorises to perform required duties. The preferred means an operator may use to meet this requirement is to establish a flight follower training and qualification programme, which includes competency checks.



14.2 Familiarity With Weather Conditions, Facilities and Services

- 14.2.1 A PIC may not begin a flight unless the PIC is thoroughly familiar with reported and forecasted weather conditions on the route to be flown and until the PIC has obtained all available reports on aerodrome conditions and irregularities of navigation facilities that may affect the safety of the flight.
- 14.2.2 During the flight, the PIC must obtain any additional available information on meteorological conditions and facilities that may affect the safety of the flight. The operator is responsible for ensuring that the PIC has the means to obtain this information. The operator is not required to be able to establish in-flight radio communications with the flight to deliver this information. One acceptable means an operator may use to comply with this requirement is to contract with a commercial radio service to provide this information.

14.3 Flight Following System Facilities

- 14.3.1 Each charter operator must have a flight following system. The flight following system the operator uses must be described or referenced in the air operator's Operations Specifications. Most flight following systems are too complex to be described in a single paragraph; therefore, the preferred practice is for the system to be described in the air operator's Operations Manual, and referenced in the air operator's Operations Specifications.
- 14.3.2 The operator must provide one or more flight following facilities to control and monitor the progress of each flight. Each flight following facility must be equipped with communications for monitoring the departure of each flight from the point of origin to its arrival at destination (including intermediate stops, diversions, and delays). Communications may be made by means of private facilities (such as company radio) or commercial facilities (such as telephone, telex, or radio). Air operators conducting charter operations are not required to provide the capability to contact flights en-route by radio. Communications are normally considered adequate when the flight follower can transmit a message to a PIC who is on the ground at the departure, destination, or intermediate point and can then receive confirmation of receipt of that message within 15 minutes.
- 14.3.3 **Regulation 9.3.1.23** of the Nigeria Civil Aviation Regulations does not prohibit air operators conducting charter operations to contract with other organizations to provide operational control functions. The operator is responsible for ensuring the adequacy of all facilities, access to communications and information sources, the adequacy of policies and procedures, and the competency of flight followers (whether or not the operator or a contracting party provides them).
- 14.3.4 Inspectors must ensure that the air operator's Operations Manual contains adequate policy, guidance, and procedures for operational control personnel to perform their assigned duties, comply with regulatory requirements, and to ensure safe operations in normal, abnormal and emergency circumstances. Flight followers must be familiar with, and have access to, the air operator's Operations Manual when on duty.

14.4 Flight Release Form

14.4.1 Regulation 8.6.2.20 of the Nigeria Civil Aviation Regulations requires a flight plan be completed before each commercial air transport flight. Regulation 8.12.1.5 of the Nigeria Civil Aviation Regulations specifies that a flight release/operational flight plan must contain at least the following information:

- a) Company or organization name;
- b) Make, model, and registration number of the aircraft being used;
- c) Flight or trip number;
- d) Date of flight;
- e) Name of each flight crew member, cabin crew member, and the pilot designated as PIC;
- f) Departure aerodrome, destination aerodrome, and alternate aerodromes;
- g) Route of flight;
- h) Minimum fuel supply ;
- i) Type of operation (such as IFR and VFR);
- j) Weather reports, available weather forecasts (or a combination thereof) for the destination aerodrome and alternate aerodromes that are the latest available at the time the flight release is signed (these must be printed on, or attached to, the flight release).

14.5 Weather Requirements for Flight Release

14.5.1 Inspectors must ensure that air operators are aware of the weather requirements for the release of charter flights.

14.5.2 **Flight Release under VFR.** A charter flight shall not be released for VFR operations unless the weather reports and forecasts indicate that the flight can reasonably be expected to be completed as specified in the release. The ceiling and visibility en-route and at the destination aerodrome must be VFR and remain above applicable VFR minima until the aircraft arrives at the aerodrome or aerodromes specified in the flight release.

NOTE: *Charter flights shall not be released under VFR rules unless specifically authorised by the Operations Specifications.*

14.5.3 **IFR Takeoff Weather Minima.** Regulation 8.6.2.9 of the Nigeria Civil Aviation Regulations prohibits the release of a flight without a suitable takeoff alternate specified in the flight release if it would not be possible to return to the aerodrome of departure. When weather conditions are below the landing minima specified in the air operator's Operations Specifications at the departure aerodrome, the flight may not be released unless the following conditions exist:

- a) For a two engine aeroplane, an alternate aerodrome is available which is not more than 1 hour from the departure aerodrome at normal cruising speed, in still air, and with one engine inoperative;
- b) For an aeroplane with three or more engines, an alternate aerodrome is available which is not more than 2 hours from the departure aerodrome at normal cruising speed, in still air, and with one engine inoperative;



- c) The takeoff alternate aerodrome is listed on the flight release;
- d) The weather conditions at the designated takeoff alternate aerodrome meet the requirements of the air operator's Operations Specifications.

14.5.4 **Destination Weather - IFR Operations.** Regulation 8.6.2.7 of the Nigeria Civil Aviation Regulations prohibits an operator from releasing a charter flight under IFR unless the weather reports and forecasts indicate that the weather will be at or above minima required by the Operations Specifications at the destination aerodrome at the estimated time of arrival.

Note: A partial exemption may be granted for commercial air transport IFR flight planning, to the effect that the weather at the destination does not have to be at or above the approach minima to release and commence a flight, as long as the designated alternate aerodrome meets the IFR weather selection criteria

14.5.5 **Alternate Weather. Regulations** 8.6.2.6 and 8.6.2.7 of the Nigeria Civil Aviation Regulations prohibits an operator from releasing a charter flight under IFR unless at least one alternate aerodrome is listed in the flight release for each destination aerodrome unless there is a standard instrument approach procedure prescribed for the destination aerodrome and available weather information indicates from two hours before to two hours after the ETA:

- a) A cloud base of at least 1,000 ft above the minima associated with the instrument approach procedure; and;
- b) Visibility of at least 5 km or more than the minimum associated with the procedure.

14.5.6 An air operator may apply to the Authority for a reduction to the ceiling and visibility requirements listed above where no suitable destination alternate exists.

4.6 Fuel Supply

14.6.1 Inspectors must be aware of the fuel planning provisions of Regulations 8.6.2.13 and 8.12.1.11 of the Nigerian Civil Aviation Regulations.

14.6.2 **Required Fuel Supply.** An operator may not release a flight for takeoff unless, considering winds and forecast weather conditions, the flight carries all of the following types of fuel:

- a) **En-route Fuel:** That fuel necessary for a flight to reach the aerodrome to which it is released and then to conduct one instrument approach and a possible missed approach;
- b) **Alternate Fuel:** That fuel necessary for a flight to fly from the point of completion of the missed approach at the destination aerodrome to the most distant alternate aerodrome, make an IFR approach (if the forecast indicates such conditions will exist), and then complete a landing;
- c) **Reserve Fuel:** That fuel necessary for a flight to fly for 45 minutes at normal cruising fuel consumption;

- d) **Contingency Fuel:** That fuel necessary for a flight to compensate for any known traffic delays and to compensate for any other condition that may delay the landing of the flight.

Note: The air operator's Operations Manual should contain specific policies and instructions to both flight followers and PICs for computing the amount of contingency fuel to be carried under the circumstances likely to be encountered in the air operator's specific operation.

14.6.3 **Departure Fuel.** The fuel listed in previous subparagraph 14.6.2 must be on board the aircraft at takeoff. The flight release must include this amount. The air operator's Operations Manual should clearly state this point to pilots, flight followers, and load planners. An additional increment of fuel for start up, taxi, and predeparture delays must be included in the fuel load on board the aircraft at engine start.

14.7 Amendment of a Flight Release

14.7.1 In the absence of an emergency, a flight may only proceed to the destination to which it was originally released. If the flight is unable to land at the original destination, it may only proceed to the designated alternate aerodrome. Regulation 8.12.1.13 of the Nigeria Civil Aviation Regulations however, allows for an original flight release to be amended while the flight is en-route. An amendment may become necessary or desirable because the conditions under which the flight was released have changed (unplanned re-release) or because it may have been planned before departure.

14.7.2 **Destination Weather Requirements While En-route.** PICs should obtain any information on weather and facilities that may affect the safety of flight while flights are airborne. Part 8 of the Nigeria Civil Aviation Regulations does not prohibit a flight from continuing toward a destination which has gone below landing minima or one which is forecast to be below landing minima at the ETA by a forecast issued after the flight has departed. For example, there may be enough fuel on board to hold overhead the destination until the weather is forecast to improve. Regulation 8.5.1.1 of the Nigeria Civil Aviation Regulations does, however, prohibit the flight from continuing to the destination when, in the opinion of the PIC, it is unsafe to do so. Inspectors should ensure that the air operator's Operations Manual provides guidance to both PICs and flight followers for dealing with these circumstances.

14.7.3 **Alternate Weather Requirements While En-route.** In accordance with Regulation 8.6.2.7 of the Nigeria Civil Aviation Regulations, an alternate aerodrome (not having published alternate minima) may be named which is below alternate minima at the time of release, but which is forecast to be at or above alternate minima at the ETA. Inspectors should ensure that the air operator's Operations Manual contains specific procedures for notifying the PIC and for monitoring the weather at the alternate aerodrome when the selected alternate aerodrome is below minima at departure. These procedures may require the designation of a second alternate aerodrome or that contingency fuel must be carried on the flight.

- a) Conditions other than ceiling and visibility can affect minima, such as navigational aids, runway lighting, and snow removal operations. PICs and flight followers must monitor these factors as well as ceiling and visibility at designated alternate aerodromes;



- b) When weather conditions permit, many air operators release flights without an alternate aerodrome. In some instances, while the flight is en-route, destination weather may deteriorate to below what was used to release the flight and to the point that an alternate aerodrome would have been required. The air operator's Operations Manual must contain direction and guidance to PICs and flight followers on how to manage such a situation;
- c) The flight release may be amended while the aircraft is en-route to include any aerodrome as an alternate that has the following:
 - (i) Authorisation for that type of aircraft;
 - (ii) Is within the fuel range of the aircraft;
 - (iii) Alternate aerodrome landing weather minima.

14.7.4 Requirements to Amend a Flight Release. Before a destination aerodrome or an alternate aerodrome may be changed, the following requirements must be met:

- a) The PIC and the flight follower must jointly approve the change;
- b) The PIC must be thoroughly familiar with reported and forecast weather conditions (including adverse weather) and the status of communications, navigation, and aerodrome facilities;
- c) The destination and alternate aerodromes specified in the amended release must be forecast to be above the weather minima required in the air operator's Operations Specifications for the destination and alternate aerodromes, respectively, at the ETA;
- d) The aircraft must have sufficient fuel on board at the time and point that the release was amended to complete the flight in compliance with the applicable fuel requirements;
- e) Each person who amends a flight release must record that amendment.

14.7.5 Pre-planned Amendment of a Flight Release. A charter operator may only conduct planned re-release operations when authorised by the air operator's Operations Specifications.

Note: *This authorisation does not apply to the amendment of flight plans for domestic operations.*

14.8 En-route Terrain Clearance

14.8.1 Regulation 8.8.7 on Aircraft Operating and Performance Limitations of the Nigeria Civil Aviation Regulations contains the limitations on weights at which aircraft may be released due to terrain clearance requirements. While these limitations apply to all types of aircraft used in commercial air transport, they are particularly restrictive to two engine aircraft operated in mountainous terrain.

14.8.2 Inspectors should be aware that to meet the limitations in Part 8.7 on Aircraft Operating and Performance Limitations of Part 8 of the Nigeria Civil Aviation Regulations air operators may be required to limit takeoff weights or to list en-route alternate aerodromes on the flight release.



15.0 OPERATIONAL CONTROL INSPECTIONS

15.1 General

- 15.1.1 An operational control inspection has two primary objectives. The first objective is for the inspector or team to ensure that the operator is in compliance with the minimum requirements specified in the Regulations and the operations specifications. The second objective is for the inspector or team to ensure that the operator's system of control provides positive assurance of public safety.
- 15.1.2 The operator must meet both objectives to obtain and retain an operating certificate under Regulation 9.1.1.4 of the Nigeria Civil Aviation Regulations. To make this determination, the inspector or team must evaluate the operator to ensure that the following criteria are met:
- a) Responsibility for operational control is clearly defined;
 - b) An adequate number of operational control personnel are provided;
 - c) Applicable manuals contain adequate policy and guidance to allow operational control personnel and flight crew to carry out their duties efficiently, effectively, and with a high degree of safety;
 - d) Operational control personnel are adequately trained, knowledgeable, and competent in the performance of their duties;
 - e) Flight control personnel and flight crew have been provided with the necessary information for the safe planning, control, and conduct of all flights;
 - f) The operator provides adequate facilities;
 - g) The operator performs all operational control functions required by the regulations;
 - h) The operator performs all functions necessary to provide adequate operational control in the environment in which the operations are conducted;
 - i) Adequate emergency procedures and contingency plans have been formulated.

15.2 Practices and Procedures

- 15.2.1 Inspectors conduct operational control inspections through systematic manual reviews, records inspections, observations, and interviews.
- 15.2.2 **Inspector Preparation and Manual Review.** Before starting an operational control inspection, the inspector should become thoroughly familiar with the sections of this Order that are applicable to the operator. Inspectors must then become familiar with the operational control sections of the



operator's Operations Manual. This manual review is both the first step in the inspection process and preparation for subsequent steps. The checklists for the various aspects of the inspection contain the topics that should be included in the operator's manuals. Inspectors should use the checklists located at the end of this Part to determine if the necessary topics are covered. In doing this the Inspector will need to utilize both checklist : CL:O-OPS 004 and CL:O-OPS 020B

15.2.3 Records Checks, Interviews, and Observations. The inspector should establish with the operator a mutually convenient time for conducting the records checks and interviews.

- a) Inspectors must conduct interviews with both management and working level personnel to meet inspection objectives. Inspectors should plan these interviews so that the required information can be obtained without distracting personnel from their duties and responsibilities. To prevent intruding into actual operations, the inspector should, if possible, conduct these interviews privately and away from the operations premises;
- b) **Inspectors must observe actual flight release operations.** Before beginning these observations, an inspector should request a tour of the operator's facility for orientation, during which the inspector should observe a number of different people at work. The inspector should ask questions; however, care must be taken not to distract or interfere with the individuals in the performance of their assigned duties. An effort should be made by the inspector to make observations during periods of peak activity, adverse weather, or during non-routine operations. Inspectors of large operators should arrange to have these observations conducted at random times throughout the year, preferably in periods of inclement weather;
- c) Inspectors should observe competency checks being conducted to evaluate the knowledge level of the flight operations officer and the performance of the supervisor.

15.3 Policies and Procedures

15.3.1 The following general policies and procedures apply:

- a) **Authorised Operations:**
 - (i) Are the operations that may and may not be conducted according to the Operations Specifications (including areas of operation) clearly specified?
 - (ii) Are there clear definitions of scheduled and charter operations? Are there clear definitions of the rules under which each of these operations are conducted?
 - (iii) Are the applicable Regulations identified and the operators policies applicable to each type of operation clearly stated?
- b) **Manuals:**
 - (i) Is there a section of the Operations Manual in which the policy and guidance for operational control have been collected for the guidance of flight crew and Flight operations officers?
 - (ii) Are the topics listed on this checklist adequately covered?
 - (iii) Is the applicable section of the Operations Manual readily available to flight operations officers and flight crew while they perform their duties?
 - (iv) Is the copy of the operator's Operations Manual that is available to flight operations

officers or flight crew current?

c) Original Release:

- (i) Are the conditions clearly stated under which a flight may and may not be dispatched/released?
- (ii) Are the conditions stated under which a flight must be re-routed, delayed, or cancelled?
- (iii) Does the flight release contain all the required elements?
- (iv) Are limitations required in the remarks of the release?
- (v) Is a written copy of weather reports and forecasts including Pilot Reports (PIREPs) and NOTAMs attached to the release and provided to the flight crew?

d) Responsibility for Pre-departure Functions:

- (i) Are the responsibility and procedures for accomplishing the following functions clearly specified?
 - (a) Crew assignment;
 - (b) Load planning;
 - (c) Aircraft routing;
 - (d) Flight planning;
 - (e) Release of the aircraft from maintenance;
 - (f) Control of MEL and CDL limitations;
 - (g) Mass and balance.
- (ii) Have adequate procedures for cross-checking and verifying these activities been established?
- (iii) Is each of these procedures effective?
- (iv) What means has the operator established for the PIC and flight operations officer to ensure that each of these functions has been satisfactorily accomplished before the aircraft departs?

e) Flight Operations Officer Briefing:

- (i) How do the operator's procedures provide for briefing of the PIC by the flight operations officer?
- (ii) Is the minimum content of the briefing specified and adequate?

f) Dual Responsibility:

- (i) How are the signatures of both the PIC and the flight operations officer on the dispatch release accomplished?
- (ii) Is the PIC's obligation to operate the flight according to the release, or to obtain an amended release, clearly stated?

g) Flight Following:

- (i) Are the flight operations officer, flight following requirements and procedures clearly stated?
- (ii) Is policy and guidance provided to flight crew and flight operations officers for monitoring fuel en-route?
- (iii) Are flight crew reporting requirements and procedures clearly stated?



- (iv) Are there specified procedures for the flight operations officer to follow when a required report is not received?
 - (v) Are there specified procedures and system to be used for aircraft tracking and location of an aeroplane in distress?
 - (vi) Is a record of communications made and retained?
- h) Inability to Proceed as Released:**
- (i) Is a policy stated concerning the PICs latitude to deviate from a dispatch release without obtaining a new release?
 - (ii) Is there specific and adequate direction and guidance to PICs and flight operations officers for the actions to take when a flight cannot be completed as planned (such as destinations or alternates below minima, runways closed or restricted)?
 - (iii) Are procedures to follow specifically and clearly stated in case of diversion or holding?
- i) Weather:**
- (i) Does the operator obtain weather reports from an approved source?
 - (ii) Are forecasts based on approved weather reports?
 - (iii) Does the operator have an adverse weather system?
 - (iv) Does the operator have adequate procedures for providing the latest available weather reports and forecasts to flight crew while the flight is en-route?
 - (v) Does the operator have adequate procedures for updating weather information when the aircraft is delayed on the ground?
- j) Weather Minima:**
- (i) Is release under VFR authorised by the Operations Specifications?
 - (ii) If so, has the forecast and actual weather allowed VFR flight to destination on those flights so released?
 - (iii) Have turbojet aircraft been released under VFR?
 - (iv) What IFR departure minima are authorised by the Operations Specifications?
 - (v) When flights are released with the departure aerodrome below landing minima, are takeoff alternates named on the dispatch release?
 - (vi) What destination weather minima are authorised by the Operations Specifications?
 - (vii) What weather minima are authorised for captains under the Operations Specifications that do not meet the requirements of regulation of Part 8 of the Nigeria Civil Aviation Regulations.
 - (viii) When destination alternates are required, are they named on the dispatch release?
 - (ix) Is the weather at the named alternate aerodrome equal or better than that required by the Operations Specifications?
 - (x) Is originall defined for the designation of two alternates on the dispatch release?
 - (xi) Are two alternates designated when required?
 - (xii) How does the operator ensure that the flight operations officers are aware of these limitations before dispatching a flight?
 - (xiii) Do weather forecasts from the trip records show that these limits have been complied with for dispatch?

(xiv) AERODROME OPERATING MINIMA

- ✓ Operating minima to be included for every airfield used regularly in respect of take-off, landing and visual manoeuvring
- ✓ Runways NOT to be used to be clearly indicated
- ✓ Conditions for commencing a flight
- ✓ Conditions for commencing/continuing an approach
- ✓ Definitions and documentation of:
 - ✓ Decision Height
 - ✓ Approach to landing
 - ✓ Circling approach procedures
 - ✓ RVR, etc.
- ✓ Minima for pilots-in-command with limited experience on type
- ✓ Take-off and landing when an RVR reported
- ✓ Take-off and landing when RVR is reported from more than one position on the runway
- ✓ Instructions concerning landing in shallow fog
- ✓ Alternate for each intended destination to be specified
- ✓ General guidance concerning selection of alternate aerodrome
- ✓ Guidance concerning selection of “return” alternate
- ✓ Instructions concerning use of return alternate — weather below landing minima
- ✓ Minima for aerodromes without approach aids
- ✓ Special minima for non-public transport flights
- ✓ Special rules for aircraft with performance category C, D or E
- ✓ Calculation of in-flight visibility for manoeuvring
- ✓ Relationship between RVR and DH
- ✓ Conversion of reported MET visibility to RVR

(k) Selection of Alternates:

- (i) Is policy, direction, and guidance provided for the selection of alternates?
- (ii) Is terrain and engine-out performance considered in the alternate selection?

l) NOTAMs:

Is the required NOTAM information provided?

m) Information:

- (i) What provisions does the operator make for supplying aerodrome and navigation information?
- (ii) What means does the operator use to comply with the requirement for an aerodrome data system? Is it adequate?
- (iii) Are flight crew provided with written flight plans for monitoring flight progress and fuel burn?
- (iv) How does the operator provide data flight operations officer on takeoff and landing minima at each aerodrome?
- (v) Does the flight operations officer have immediate access to such data?
- (vi) Are provisions made for non-standard operations, such as inoperative centerline lighting?

n) Fuel

- (i) Are all the required increments of fuel provided (start and taxi, takeoff to arrival at destination, approach and landing, missed approach, alternate fuel, 45 minutes of reserve, and contingency fuel)?
- (ii) Are the operator's policies concerning contingency fuel adequate for the environment in

- c) Knowledge of the Area:**
- (i) Does the flight operations officer immediately recognise the aerodrome identifiers for the aerodromes in the area in which they are working?
 - (ii) Are flight operations officers generally familiar with the aerodromes in the area in which they are working (number and length of runways, available approaches, general location, elevation, and surface temperature limitations)?
 - (iii) Are flight operations officers aware of which aerodromes, in the areas in which they are working, are special aerodromes, and why?
 - (iv) Are flight operations officers aware of the terrain surrounding the aerodromes in the areas in which they are working?
 - (v) Are flight operations officers aware of dominant weather patterns and seasonal variations of weather in the area?
 - (vi) Are flight operations officers aware of route segments limited by drift down?
- d) Knowledge of Aircraft and Flight Planning:**
- (i) Are the flight operations officer aware of the general performance characteristics of each aircraft with which they are working (such as average hourly fuel burn, holding fuel, engine-out, drift down height, effect of an additional 50 knots of wind, effect of a 4,000 foot lower altitude, crosswind limits, maximum takeoff and landing weights, required runway lengths)?
 - (ii) Can the flight operations officer read and explain all the items on the operator's flight plan?
- e) Knowledge of Policy:**
- (i) Are flight operations officers knowledgeable of the Operations Specifications, particularly such items as authorised minima?
 - (ii) Are flight operations officers aware of the policies and provisions of the operator's manual as discussed under policies and procedures?
- f) Knowledge of Responsibilities:**
- (i) Are flight operations officers knowledgeable of their responsibilities under Part 8 of the Nigeria Civil Aviation Regulations (such as briefing PIC; cancelling, rescheduling, or diverting for safety; in-flight monitoring; in-flight notification of PIC)?
 - (ii) Are flight operations officers knowledgeable of their responsibilities under the operator's manual as discussed in paragraph II A?
 - (iii) Are flight operations officers aware of their obligation to declare emergencies?
- g) Proficiency:**
- (i) Are flight operations officers competent in the performance of their assigned duties?
 - (ii) Are flight operations officers alert for potential hazards?
- h) Duty Time:**
- Are duty time requirements being complied with?

15.3.3 Supervisors - The following requirements apply:

- a) **Qualification.** Are supervisors qualified and current as the flight operations officer?



- b) Conduct of Checks. Are competency checks appropriate, thorough, and rigorous?

15.3.4 **Facilities and Staff** - The following requirements apply:

a) Physical:

- (i) Is enough space provided for the number of people working in the dispatch centre?
- (ii) Are the temperature, lighting, and noise levels conducive to effective human performance?
- (iii) Is the access to the facility controlled?

b) Information:

- (i) Are flight operations officers supplied with all the information they require (such as flight status, maintenance status, load, weather, facilities)?
- (ii) Is the information effectively disseminated and displayed? Can information be quickly and accurately located without overloading the flight operations officer?
- (iii) Are real time weather displays available for adverse weather avoidance?

c) Communications:

- (i) Can a flight operations officer establish rapid and reliable radio communications (voice or ACARS) with a captain when a flight is parked at the gate?
- (ii) How much time does it take to deliver a message to an en-route flight and get a response?
- (iii) Are direct voice radio communications available at all locations? Are they reliable? If communications facilities are shared with other airlines, does traffic congestion preclude rapid contact with a flight?
- (iv) If hub and spoke operations are conducted, are there adequate communication facilities available to contact and deliver a message to all arriving flights within a 15-minute period?
- (v) Are backup communications links available in case of a failure of the primary links?

d) Management:

- (i) Has overall responsibility for operations in progress been assigned to one individual who can co-ordinate the activities of the entire flight operations officer?
- (ii) Have procedures been established for co-ordinating with central flow control?
- (iii) Have adequate internal communications links been established?

e) Workload:

- (i) What method does the operator use to show compliance with the requirement to assign enough flight operations officers during periods of normal operations and periods of non-routine operations?
- (ii) Are the operator's methods adequate?
- (iii) Does the flight operations officer have enough time to perform both dispatch and flight following duties in a reasonable manner?

**PART 12.0 - FLIGHT RELEASE CHECKLIST**

NOTE: This checklist applies to all charter operators

POLICIES AND PROCEDURES

1. The following general policies and procedures apply:

(a) Authorised Operations:

Are the operations that may and may not be conducted according to the Operations Specifications, including areas of operation, clearly specified?

(b) Manuals:

- i) Is there a section of the Operations Manual in which the policy and guidance for operational control has been collected for the guidance of flight crew and flight followers?
- (ii) Are the topics listed on this checklist adequately covered?
- (iii) Is the applicable section of the Operations Manual readily available to flight followers and flight crew while they perform their duties?
- (iv) Is the operator's Operations Manual current?

(c) Original Release:

- (i) Are the conditions clearly stated under which a flight may and may not be released?
- (ii) Are the conditions stated under which a flight must be re-routed, delayed, or cancelled?
- (iii) Does the flight release contain all of the required elements?
- (iv) Are limitations placed in the remarks?
- (v) What provisions are made for PICs and flight followers to obtain weather reports and forecasts (including PIREPs and NOTAMs)?

(d) Responsibility for Pre-departure Functions:

- (i) Are the responsibilities and procedures clearly specified for accomplishing the following functions?
 - aa) Crew assignment;
 - bb) Load planning;
 - cc) Aircraft routing;
 - dd) Flight planning;
 - ee) Release of the aircraft from maintenance;
 - ff) Control of MEL and CDL limitations;
 - gg) Weight and balance.
- (ii) Have adequate procedures been established for cross-checking and verifying these activities?
- (iii) Is each of these procedures effective?
- (iv) What means has the operator established for the PIC and flight follower to ensure that each of these functions has been accomplished satisfactorily before the aircraft departs?



(e) Dual Responsibility:

- (i) How the concurrence of the flight follower is obtained before the PIC signs the release?
- (ii) Is the PICs obligation to operate the flight according to the release or to obtain concurrence of the flight follower for an amended release clearly stated?

(f) Flight Following:

- (i) Are the flight follower_s duties and procedures clearly stated?
- (ii) Is policy and guidance provided to flight followers for monitoring flight movements?
- (iii) Are flight following procedures effective?

(g) Inability to Proceed as Released:

- (i) Is a policy stated concerning the PICs latitude to deviate from the flight release without obtaining a new release?
- (ii) Is there specific and adequate direction and guidance to PICs and flight followers for the actions to take when a flight cannot be completed as planned (such as destinations or alternates below minima, runways closed or restricted)?
- (iii) Are procedures to follow specifically and clearly stated in case of a diversion or holding?

(h) Weather:

- (i) Does the operator obtain weather reports from an approved source?
- (ii) Are forecasts based on approved weather reports?
- (iii) Does the operator have an adverse weather system?
- (iv) Does the operator have adequate procedures for the flight crew to obtain the latest available weather report while the flight is en-route?
- (v) Does the operator have adequate procedures for updating weather information when the aircraft is delayed on the ground?

(i) Weather Minima:

- (i) Is release under VFR authorised by the Operations Specifications?
- (ii) If so, have the forecast and actual weather report allowed VFR flight to proceed to destination on those flights so released?
- (iii) Have turbojet aircraft been released under VFR?
- (iv) What IFR departure minima are authorised by the Operations Specifications?
- (v) When flights are released with the departure aerodrome below landing minima, are takeoff alternates named on the flight release?
- (vi) What destination weather minima are authorised by the Operations Specifications?
- (vii) What weather minima are authorised for —igh minimall captains in the Operations Specifications?
- (viii) When destination alternates are required, are they named on the flight release?
- (ix) Is the weather at the named alternate aerodrome equal to or better than that required by the Operations Specifications?
- (x) Is marginall defined for the designation of two alternates on the dispatch release?
- (xi) Are two alternates designated when required?
- (xii) How does the operator ensure that flight followers are aware of these limitations before concurring with the release of a flight?

- (xiii) Do weather forecasts from the trip records show that these limits have been complied with for dispatch?

(j) Selection of Alternates:

- (i) Are policy, direction, and guidance provided for the selection of alternates?
- (ii) Are terrain and engine-out performance considered in alternate selection?
- (iii) Is an alternate aerodrome always designated?

(k) NOTAMs:

Is the required NOTAM information provided?

l) Information

- (i) What provisions does the operator make for supplying aerodrome and navigation information?
- (ii) What means does the operator use to comply with the requirement for an aerodrome data system? Is it adequate?
- (iii) Are flight crew provided with written flight plans for monitoring flight progress and fuel burn?
- (iv) How does the operator provide data to flight followers on takeoff and landing minima at each aerodrome?
- (v) Do flight followers have immediate access to such data?
- (vi) Are provisions made for non-standard operations such as inoperative centre line lighting?

m) Fuel:

- (i) Are all of the required increments of fuel provided (such as start and taxi, takeoff to arrival at destination, approach and landing, missed approach, alternate fuel, 30 minutes of reserve, and contingency fuel)?
- (ii) Are there minimum fuel procedures specified for both flight operations officers and PICs?
- (iii) Are the operator's policies concerning contingency fuel adequate for the environment in which operations are conducted?

(n) Emergency Procedures:

Are emergency action procedures and checklists published and readily available?

- (i) In-flight Emergency;
- (ii) Crash;
- (iii) Overdue or missing aircraft;
- (iv) Bomb threat;
- (v) Hijacking.

(o) Changeover Procedures:

Is an adequate overlap provided for the flight follower being released to brief the oncoming flight follower on the situation?

(p) Trip Records:

- (i) Are the required trip records carried to destination?



- (ii) Are trip records retained for 30 days?

FLIGHT FOLLOWERS

2. The following requirements apply:

(a) Qualification:

- (i) What means does the operator use to comply with the requirement that flight followers are competent? Is the operator's method effective?
- (ii) How does the operator ensure that flight followers are currently familiar with the areas in which they work?
- (iii) How are meteorologists qualified?

(b) Knowledge of Weather:

- (i) Are flight followers knowledgeable of the following weather conditions?
 - aa) Surface (fronts, fog, low ceilings);
 - bb) Upper Air (tropopause, jet streams);
 - cc) Turbulence (pressure and temperature gradients);
 - dd) Severe (low level windshear, microburst, icing, thunderstorms).
- (ii) Can flight followers read a terminal report, forecast accurately, and interpret the meanings?
- (iii) Can flight followers read various weather depiction charts and interpret the meanings?
- (iv) Can flight followers read upper air charts and interpret the meanings?

(c) Knowledge of the Area:

- (i) Do flight followers immediately recognise the aerodrome identifiers for the aerodromes in the area in which they are working?
- (ii) Are flight followers generally familiar with the aerodromes in the area in which they are working (number and length of runways, available approaches, general location, elevation, and surface temperature limitations)?
- (iii) Are flight followers aware of which aerodromes, in the areas in which they are working, are special aerodromes and why?
- (iv) Are flight followers aware of the terrain surrounding the aerodromes in the areas in which they are working?
- (v) Are flight followers aware of dominant weather patterns and seasonal variations of weather in the area?
- (vi) Are flight followers aware of route segments limited by drift down?
- (d) Knowledge of Aircraft and Flight Planning:
 - (i) Are flight followers aware of the general performance characteristics of each aircraft with which they are working (such as average hourly fuel burn, holding fuel, engine-out drift down height, effect of an additional 50 knots of wind, effect of a 4,000 foot lower altitude, crosswind limits, maximum takeoff and landing weights, required runway lengths)?
 - (ii) Can flight followers read and explain all the items on the operator's flight plan?

(e) Knowledge of Policy:

- (i) Are flight followers knowledgeable of the Operations Specifications, particularly authorised minima?
- (ii) Are flight followers aware of the policies and provisions of the operator's manual as discussed under policies and procedures?
- (f) Knowledge of Responsibilities:
 - (i) Are flight followers knowledgeable of their responsibilities under the Regulations?
 - (ii) Are flight followers knowledgeable of their responsibilities under the operator's manual as discussed in paragraph II A?

(g) Proficiency:

- (i) Are flight followers competent in the performance of their assigned duties?
- (ii) Are flight followers alert for potential hazards?

FACILITIES AND STAFF

3. The following apply:

- (a) Physical:
 - (i) Is enough space provided for the number of people working in the flight following centre?
 - (ii) Are the temperature, lighting, and noise levels conducive to effective human performance?
 - (iii) Is access to the facilities controlled?
- (b) Information:
 - (i) Are flight followers supplied with all the information they require (flight status, maintenance status, load, weather, facilities)?
 - (ii) Is information effectively disseminated and displayed? Can information be quickly and accurately located without overloading the flight follower?
 - (iii) Are real time weather displays available for adverse weather avoidance?
- (c) Communications. Can a flight follower establish reliable communications with a PIC before release?
- (d) Management:
 - (i) Has overall responsibility for operations in progress been assigned to one individual who can co-ordinate the activities of all flight followers?
 - (ii) Have procedures been established for co-ordinating with central flow control?
 - (iii) Have adequate internal communications links been established?
- (e) Workload.
 - (i) What methods does the operator use to show compliance with the requirement to assign enough flight followers during periods of normal operations and periods of



- nonroutine operations? Are the operator's methods adequate?
- (ii) Do flight followers have enough time to perform both release and flight following duties in a reasonable manner?

FLIGHT FOLLOWERS

4. The following requirements apply:

(a) Qualification:

How does the operator ensure that flight followers are currently familiar with the areas in which they work? Are flight followers given en-route familiarisation in extended overwater operations?

(b) Knowledge of Extended Range Operations:

Are flight followers knowledgeable in the performance characteristics of each aircraft with respect to overwater considerations (such as average hourly fuel burn, engine-out, drift down height, engine-out cruise performance, effect of an additional 50 knots of wind on Equal Time Point (ETPs), effect of a 4,000 foot lower altitude, relationship of single engine and 2 engine ETPs)?

(c) Knowledge of the Area:

- (i) Do flight followers immediately recognise the aerodrome identifiers for the aerodromes in the area in which they are working?
- (ii) Are flight followers generally familiar with the aerodromes in the area in which they are working (number and length of runways, available approaches, general location, elevation, and surface temperature limitations)?
- (iii) Are flight followers aware of which aerodromes are special aerodromes in the areas in which they are working, and why?
- (iv) Are flight followers aware of dominant weather patterns and seasonal variations of weather in the area (such as monsoons and jet streams)?
- (v) Are flight followers aware of route segments limited by drift down, engine-out performance, or depressurisation considerations?
- (vi) Are flight followers aware of the available en-route alternates and the characteristics of these aerodromes?
- (d) Knowledge of Special Fuel Reserves and Planned Re-release: When special fuel reserves or planned re-releases are authorised, are flight followers thoroughly versed in these procedures and requirements?