ACCIDENT INVESTIGATION BUREAU

INVESTIGATION POLICY AND PROCEDURES MANUAL (iPPM)

Issue: 02 **Revision: 0 – 18 December 2018**

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PREAMBLE

This Investigation Policy and Procedures Manual (iPPM) is an internal document of Accident Investigation Bureau (AIB) of Nigeria (herein refered to as *the Bureau*). It contains information, policy, procedures and guidance needed to perform the statutory functions of the Bureau in the investigation of Air Accidents and Incidents as required by the Civil Aviation Act and the current Civil Aviation (Investigation of Air Accidents and Incidents) Regulations. It has been prepared for the use and guidance of all personnel, principally Air Safety Investigators (ASIs) in the performance of their assigned duties.

The policies and procedures contained herein are in conformity with international Standards and best practices. It was developed using the SARPs and guidance material promulgated by ICAO, as well as materials and best practices of some States. The content of this iPPM is consistent with and is organized in accordance with guidance materials contained in the ICAO *Manual on Accident and Incident Investigation Policies and Procedures* (Doc 9962) and *Manual of Aircraft Accident and Incident Investigation* (Doc 9756).

The provisions of this manual are binding on the actions of the Bureau, all its personnel, any other Nigerian government and aviation industry organizations and personnel, and other personnel and organizations from outside of the country that participate in the AIB-led investigations.

I require all staff to use the relevant portions of this manual in the performance of their duties.

This manual is not a substitute for investigation training and experience, as well as common sense. **Safety Investigators are expected to use good judgment in matters where specific guidance has not been given.**

Suggestions to improve format, presentation and contents of this manual are welcomed. All suggestions should be submitted to the Commissioner/CEO through email: commissioner@aib.gov.ng.

Engr. Akin Olateru *M.Sc., CMILT, FRAeS*
Commissioner/CEO

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MANUAL AMENDMENT PROCEDURES

This manual is developed in fulfillment of the requirements of Civil Aviation Act, Civil Aviation (Investigation of Air Accidents and Incidents) Regulations and ICAO SARPs.

Therefore amendment to the above documents may affect a portion or the whole of this manual. As such, these documents shall be monitored by the Commissioner/CEO or any designated staff member or committee of the Bureau to capture any amendment to them that may affect this manual. Consequently, the affected portion of this manual is revised as soon as practicable to ensure its contents remain up-to-date, pertinent and accurate.

This iPPM is a controlled document of the Bureau to be used by ASIs as a guidance material. The Commissioner/CEO shall ensure Air Safety Investigators (ASIs) use the most up-to-date version of the iPPM during performance of their assigned duties.

As a result of the dynamic nature of the industry and evolution of new technology, there may be need for revision of this manual. Regular revision will ensure that the manual remains both pertinent and accurate.

The Commissioner/ CEO has constituted a standing Regulations committee to review this manual on a periodic basis (at least once a year) and to prepare timely amendments, as necessary, to ensure its currency and consistency with the standards and best practices of the international aviation community.

In order to keep this manual relevant and accurate, readers and users are advised to submit their suggestions for improving it in terms of format, content or presentation are welcome. Any such recommendation or suggestion will be examined and, if found suitable, will be included in the next revision of the manual upon approval by the Commissioner/CEO or any person designated by the Commissioner/CEO.

Suggestions for change should be submitted to the Commissioner/CEO by completing the Document Amendment Form AIB.01.01 (refer to appendix N).

Comments concerning this manual should be addressed to: commissioner@aib.gov.ng

The Commissioner/CEO of the Bureau is accountable for approving the contents and amendments of this Manual.

DEFINITION OF TERMS

When the following terms are used in this manual, they have the following meanings:

Accident: An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down, in which:

a) a person is fatally or seriously injured as a result of:

— being in the aircraft, or

— direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or

— direct exposure to jet blast,

except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

b) the aircraft sustains damage or structural failure which:

— adversely affects the structural strength, performance or flight characteristics of the aircraft, and

— would normally require major repair or replacement of the affected component,

except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome); or

c) the aircraft is missing or is completely inaccessible.

Note 1.— For statistical uniformity only, an injury resulting in death within thirty days of the date of the accident is classified, by ICAO, as a fatal injury.

Note 2.— An aircraft is considered to be missing when the official search has been terminated and the wreckage has not been located.

Note 3.— The type of unmanned aircraft system to be investigated is addressed in ICAO Annex 13, paragraph 5.1.

Note 4.— Guidance for the determination of aircraft damage can be found in ICAO Annex 13, Attachment G.

Accident Investigation Authority: The State organization responsible for conducting aircraft accident investigations.

Accident Safety Investigator: A person engaged in the investigation of aircraft accidents, incidents and other aviation safety hazards.

Accredited representative: A person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State. Where the State has established an accident investigation authority, the designated accredited representative would normally be from that authority.

Adviser: A person appointed by a State, on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation.

Aircraft: Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

Audit: A systematic and objective review of a State's aviation framework to verify compliance with the provisions of the Chicago Convention or national regulation, conformance with or adherence to Standards and Recommended Practices (SARPs), procedures and good aviation safety practices.

Authority: Nigerian Civil Aviation Authority.

Bureau: Accident Investigation Bureau of Nigeria.

Causes: Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident. The identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

Civil aviation authority: The governmental entity or entities however titled, that are directly responsible for the regulation of all aspects of civil air transport, technical (i.e. air navigation and aviation safety) and economic (i.e. the commercial aspects of air transport).

Causes: Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident. The identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

Contracting State: Any state (including Nigeria), which is a party to the Convention on International Civil Aviation.

Contributory Factors: Actions, omissions, events, conditions, or a combination thereof, which if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. The identification of contributory factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

Crew: Every person employed or engaged in an aircraft in flight on the business of the aircraft.

Commissioner: The Chief Executive Officer of Accident Investigation Bureau appointed under the Civil Aviation Act, 2006.

Dangerous Goods: *Articles or substances which are capable of posing a risk to health, safety, property or the environment.*

Draft Final Report: *A report sent to the relevant State, Authority and other interested parties in the investigation, inviting their significant and substantiated comments on the report.*

Fatal Injury: An injury resulting in death within thirty (30) days of the date of the accident.

Final Report: The Bureau's conclusive report on the investigation into an aircraft accident or incident which includes the pertinent factual information, analysis, conclusions and when appropriate, associated safety recommendations issued by the Bureau.

Flight recorder: Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

Note.— See Annex 6, Parts I, II and III, for specifications relating to flight recorders.

General aviation operation: An aircraft operation other than a commercial air transport operation or an aerial work operation.

Incident: An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

Note.— The types of incidents which are of main interest to the International Civil Aviation Organization for accident prevention studies are listed in ICAO Annex 13, Attachment C.

Investigation: A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and/or contributing factors and, when appropriate, the making of safety recommendations.

Investigator: The Air Safety Investigator.

Investigator-in-charge: A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

Interim Statement: The communication issued by the Bureau to the public on each anniversary of the accident or incident for informing those having a direct interest in the investigation regarding the progress of an ongoing investigation and any safety issues raised during the investigation.

Maximum Mass: Maximum certificated take-off mass.

Minister: The minister responsible for Nigerian Civil Aviation.

Next-of- kin: The immediate family or other persons closely connected with the victim of an accident.

Observer: A representative of a concerned department who is authorized by the Bureau to attend an investigation as an observer, or the Bureau's investigator authorized to attend an investigation being conducted by the concerned department.

Occurrence: Accident, serious incident, incident or other safety related events.

Operator: A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Pilot-in-Command: A pilot designated by the operator, or in the case of general aviation, the owner as being in command and charged with the safe conduct of a flight.

Police Officer: Any person who is a member of the Nigeria Police Force.

Preliminary Report: The communication used for the prompt dissemination of data obtained during the early stages of the investigation.

Regulations: Civil Aviation (Investigation of Air Accidents and Incidents) Regulations of Nigeria, made pursuant to the Civil Aviation Act, 2006.

Relevant record: Any item in the possession, custody or power of the Commissioner which is of a kind referred to above.

Safety Investigator-in-charge: A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

Note.— Nothing in the above definition is intended to preclude the functions of an Safety Investigator-in-charge being assigned to a commission or other body.

Maximum mass: Maximum certificated take-off mass.

Operator: A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Preliminary Report: The communication used for the prompt dissemination of data obtained during the early stages of the investigation.

Safety recommendation: A proposal of an accident investigation authority based on information derived from an investigation, made with the intention of preventing accidents or incidents and which in no case has the purpose of creating a presumption of blame or liability for an accident or incident. In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies.

Safety recommendation of global concern: *A* safety recommendation made to a State civil aviation authority, to a regional certification authority, or to ICAO regarding a systemic deficiency having a probability of recurrence with potential for significant consequences, and requiring timely action to improve safety.

Serious incident: An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

Note 1.— The difference between an accident and a serious incident lies only in the result.

Note 2.— Examples of serious incidents can be found in appendix D to this iPPM.

State: A contracting State of the International Civil Aviation Organization.

State of Design: The State having jurisdiction over the organization responsible for the type design.

State of Manufacture: The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

State of Occurrence: The State in the territory of which an accident or incident occurs.

State of the Operator: The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

State of Registry: The State on whose register the aircraft is entered.

Note.— In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations which, under the Chicago Convention, attach to a State of Registry. See, in this regard, the Council Resolution of 14 December 1967 on Nationality and Registration of Aircraft Operated by International Operating Agencies which can be found in Policy and Guidance Material on the Economic Regulation of International Air Transport *(Doc 9587).*

State safety programme: An integrated set of regulations and activities aimed at improving safety.

Statement: The whole or any part of an oral, written or recorded statement relating to an aircraft accident given by the author of the statement to the Bureau.

The Annex: Annex 13 to the Convention on International Civil Aviation, Chicago 1944;

Witness: A person required to attest to matters of facts, for this purpose, all statements taken from persons in the cause of accident investigation processes before the Commissioner or any of his designated officer there of which an affirmation may be required.

LIST OF ACRONYMS

ADREP	Accident/Incident Data Reporting System
AIA	Accident Investigation Authority
AIB	Accident Investigation Bureau (Nigeria)
AIPB	Accident Investigation and Prevention Bureau
AIG/08	Accident Investigation Group (AIG) Divisional Meeting (2008)
ATC	Air Traffic Control
ATS	Air Traffic Services
BAGAIA	Banjul Accord Group Accident Investigation Authority
CAA	Civil Aviation Authority
CAD	Civil Aviation Department
CEO	Chief Executive Officer
CVR	Cockpit Voice Recorder
ECCAIRS	European Co-Ordination Centre For Aviation Incident Reporting Systems
FAAN	Federal Airport Authority of Nigeria
FDR	Flight Data Recorder
ICAO	International Civil Aviation Organization
IDP	Individual Development Plan
IIC	Safety Investigator-In-Charge
ISASI	International Society of Air Safety Investigators
MoU	Memorandum of Understanding
NAMA	Nigerian Airspace Management Agency
NCAA	Nigerian Civil Aviation Authority
NEMA	National Emergency Management Agency
NPF	Nigeria Police Force
OJT	On-The-Job Training
iPPM	Investigation Policy and Procedures Manual
RAIO	Regional Accident and Incident Investigation Organization
SARPs	Standards and Recommended Practices
SDCPS	Safety Data Collection and Processing Systems
SRGC	Safety Recommendation of Global Concern
SSP	State Safety Programme
TCB	Technical Co-Operation Bureau
USOAP	Universal Safety Oversight Audit Programme

ORGANIZATION

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1.0 INTRODUCTION

1.1 GENERAL

This manual contains the Bureau's policies and procedures for the investigation of civil aircraft accidents and incidents that occur in the Nigerian territory. This manual also contains investigation policies and procedures for the Bureau and other Nigerian organizations' participation in investigations of accidents and incidents that occur outside of Nigerian territory, but involving Nigerian interests, including Nigerian operated or/and Nigerian registered aircraft. An organizational chart of the Bureau is contained in Chapter 3 of this manual.

The policies and procedures contained herein are in conformity with international Standards and best practices.

This manual was developed using the SARPs and guidance material promulgated by ICAO, as well as materials and best practices of some States.

The provisions of this manual are binding on the actions of the Bureau including its Safety Investigators and management personnel. The provisions of this manual are also binding on any other Nigerian government and aviation industry organizations and personnel, and other personnel and organizations from outside of Nigerian that participate in the Bureau-led investigations.

Note 1.— Since investigations vary in complexity, a document of this kind cannot cover all eventualities. The more common techniques *and processes, however, have been included. Although this manual may be of use for experienced and inexperienced Safety Investigators alike, it is not a substitute for investigation training and experience, as well as common sense.*

Note 2.— Because this manual deals with investigations of accidents, serious incidents and incidents, for reasons of brevity, the terms "accidents," "investigations" and "accident investigations", as used herein, should apply equally to the investigation of accidents, serious incidents, and incidents.

1.2 STATE SAFETY PROGRAMME

In compliance with provisions of ICAO Annex 13, Attachment F, ICAO Member States are required to implement and maintain a State Safety Programme (SSP). An SSP is a management system for the management of safety by the State. The implementation of an SSP is commensurate with the size and complexity of the State's aviation system, and may require coordination among multiple authorities responsible for individual element functions in the State.

The SSP framework contemplates four components and eleven elements. The first component is "State safety policy and objectives" and its third element is "accident and incident investigation".

A State, or a regional grouping of States, must establish an independent accident and incident investigation process, the sole objective of which is the prevention of accidents and incidents, and not the apportioning of blame or liability. Such investigations are in support of the management of safety in the State. In the operation of the SSP, the State maintains the independence of the accident and incident investigation authority from other State aviation organizations.

Nigeria has established an SSP in order to manage aviation safety in Nigeria. As part of its implementation of the SSP requirements, Nigeria has established an Accident Investigation Bureau (AIB) independent and separate from the regulatory agency. The Nigerian Civil Aviation Authority (NCAA) is the Placeholder of the SSP, while the Director-General/CEO of NCAA is appointed Accountable Executive for the SSP. The Bureau is a member of the SSP Coordination Committee.

The Bureau has developed this manual as part of its efforts in support of Nigeria to implement and maintain its SSP.

1.3 BACKGROUND DOCUMENTS

The following ICAO documents provide additional information and guidance on related subjects:

a) Civil Aviation Act 2006

b) Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 2016

c) Annex 13 – Aircraft Accident and Incident investigation

d) Manual on Accident and Incident Investigation Policies and Procedures (Doc. 9962)

e) *Manual of Aircraft Accident and Incident Investigation* (Doc 9756):

Part I — *Organization and Planning*

Part II — *Procedures and Checklists* (in preparation)

Part III — *Investigation* (in preparation)

Part IV — *Reporting*

f) *Human Factors Training Manual* (Doc 9683)

g) *Manual of Civil Aviation Medicine* (Doc 8984)

h) *Safety Management Manual (SMM)* (Doc 9859)

i) Airport Services Manual (Doc 9137), Part 5 — *Removal of Disabled Aircraft*

j) *Guidance on Assistance to Aircraft Accident Victims and their Families* (Circ 285)

k) *Training Guidelines for Aircraft Accident Safety Investigators* (Circ 298)

l) *Hazards at Aircraft Accident Sites* (Circ 315)

m) Bureau's Engineering Guidance Materials

n) Bureau's Operations Guidance Material

o) Flight data Recorder Policy

p) Cockpit Voice Recorder Policy

2.0 LEGISLATIVE REQUIREMENTS

2.1 ICAO REQUIREMENTS

Article 26 of the *Convention on International Civil Aviation* specifies that it is incumbent on a State in which an aircraft accident occurs to institute an inquiry into the circumstances of the accident. This obligation can only be met when appropriate legislation is in place. Such legislation must establish an accident investigation authority (or commission, board or other body) for the investigation of aircraft accidents. ICAO Annex 13 contains SARPs for the investigation of accidents and incidents in ICAO Member States. The Civil Aviation Act 2006 and the Civil Aviation (Investigation of Air Accidents and Incidents) Regulations are the legislation and regulations put in place in Nigeria to address these international requirements.

2.2 THE REQUIREMENTS IN NIGERIA

2.2.1 General

Nigeria has adopted legislation, regulations, policies and procedures that meet the requirements of ICAO for accident and incident investigation. Nigeria has no need to forward “differences” to ICAO, in accordance with Article 38 of the Convention.

2.2.2 Legislation in Nigeria

The legislative basis for the policies and procedures contained in this manual are codified in Part VII Section 29 of the Civil Aviation Act 2006. A copy of the Act is contained in Appendix A. The Act establishes the Accident Investigation Bureau and provides its responsibilities and authorities for the investigation of aircraft accidents and incidents to be conducted in accordance with Article 26 of the Chicago Convention and ICAO Annex 13. The Civil Aviation Act specifies that provisions regarding investigations will be further regulated by government regulations.

2.2.3 Regulations in Nigeria

The regulatory basis for the policies and procedures contained in this manual are codified in the Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 2016. The regulations are consistent with the provisions of ICAO Annex 13 and other ICAO documents regarding accident and incident investigation, including the ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Parts I, II, III and IV. A copy of the regulations is contained in Appendix B.

2.3 POLICY MATTERS AND MANUAL AMENDMENTS

It is the policy of the Accident Investigation Bureau to conduct its business in accordance with ICAO SARPs, particularly those contained in ICAO Annex 13 and the ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Parts I, II, III and IV. It is also the policy of the Bureau to conduct its business in accordance with the relevant laws and regulations of Nigeria.

The laws and regulations are supplemented by this manual, which contains the policies and procedures of the Bureau for the conduct of an investigation in Nigeria or outside of Nigeria, when Nigeria's interests or responsibilities apply.

The Commissioner/CEO of the Bureau has constituted a regulation committee to monitor any amendments to ICAO SARPs or other ICAO documents to ensure that relevant Nigerian laws, regulations, policies and procedures are amended as necessary. If for some reason, Nigerian laws, regulations, policies and procedures do not meet the intent of ICAO SARPs, the Commissioner/ CEO will ensure that ICAO is notified in a timely manner of such differences, in accordance with Article 38 of the Chicago Convention.

The Commissioner/ CEO has also constituted a iPPM committee to review this manual on a periodic basis and to prepare amendments, as necessary, to ensure its currency and consistency with the standards and best practices of the international aviation community. It is part of the responsibilities of the iPPM committee to ensure that any differences between Nigeria and ICAO SARPs are notified to ICAO, pending possible amendment of Nigerian laws, regulations, policies and procedures, to resolve such differences.

3.0 INVESTIGATION OBJECTIVE AND INDEPENDENCE

3.1 ICAO REQUIREMENTS

According to ICAO Annex 13, an accident investigation authority must be strictly objective and totally impartial and must also be perceived to be so. It must also be able to conduct investigations in an independent manner that precludes interference from outside pressures. The following references are relevant:

a) ICAO Annex 13, Chapter 3, paragraph 3.1:

"The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability."

b) ICAO Annex 13, Chapter 5, paragraph 5.4:

"The accident investigation authority shall have independence in the conduct of the investigation and have unrestricted authority over its conduct…."

c) ICAO Annex 13, Chapter 5, paragraph 5.4.1:

"Any investigation conducted in accordance with the provisions of this Annex shall be separate from any judicial or administrative proceedings to apportion blame or liability.

Note: Separation can be achieved by the investigation being conducted by State accident investigation authority experts, and any judicial or administrative proceedings being conducted by other appropriate experts. Coordination, as per 5.10, between the two processes would likely be required at the accident site and in the gathering of factual information, with due consideration to the provisions in 5.12."

d) In accordance with ICAO Annex 13, Chapter 5, paragraph 5.4.3:

"A State should ensure that any investigations conducted under the provisions of this Annex have unrestricted access to all evidential material without delay and are not impeded by administrative or judicial investigations or proceedings.

Note: The intent of this recommended practice may be achieved through legislation, protocols, or agreements between the accident investigation authorities and the judicial authorities."

e) ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Part I — *Organization and Planning*, paragraphs 2.1.2 and 2.1.3, which state, in part, the following:

"The accident investigation authority must be strictly objective and totally impartial and must also be perceived to be so. It should be established in such a way that it can withstand political or other interference or pressure".

Nigeria has achieved this objective by setting up the Accident Investigation Bureau (AIB) as an independent statutory body that is separate from the Nigerian Civil Aviation Authority (NCAA). The Bureau reports direct to the President through the Minister of Aviation.

3.2 INDEPENDENCE OF THE BUREAU

Maintaining independence in the conduct of investigations will result in enhancing the credibility of the Bureau and its ability to avoid situations that have the potential to create conflicts of interest. Maintaining independence of the investigation function is equally important for accident and incident investigations.

The intent of "independence" is that the Accident Investigation Bureau shall be functionally independent, in particular of the Nigerian Civil Aviation Authority, which is responsible for airworthiness, certification, flight operation, maintenance, licensing, air traffic control or airport operation and, in general, of any other party whose interests could conflict with the task entrusted to the Bureau.

"Independence" does not mean that the Bureau would not be administratively supervised and accountable to a governmental minister or ministry (or parliament) for its finances, administration, policies and working methods (which should be transparent).

3.3 THE REQUIREMENTS IN NIGERIA

The Nigeria legislation, regulations, policies, and procedures are consistent with and reinforce the provisions of ICAO Annex 13 regarding the objective and independence of the investigation.

The requirements of the Accident Investigation Authority are contained in Part VII Section 29 of the Civil Aviation Act 2006 for the independence and objectivity of investigations, as follows:

a) ensure the establishment of an adequately funded, professionally trained, independent and impartial aircraft accident investigative body in Nigeria;

b) ensure the independence of all investigations into aircraft accidents and incidents that are carried out in Nigeria, from political or other interference or pressure; and

c) promote the use of a common set of regulations compliant with the provisions of ICAO Annex 13 *Aircraft Accident and Incident Investigation*, including regulations for the protection of safety data with the purpose of accident prevention and not the assignment of blame.

3.4 ORGANIZATIONAL CHART OF THE ACCIDENT INVESTIGATION BUREAU

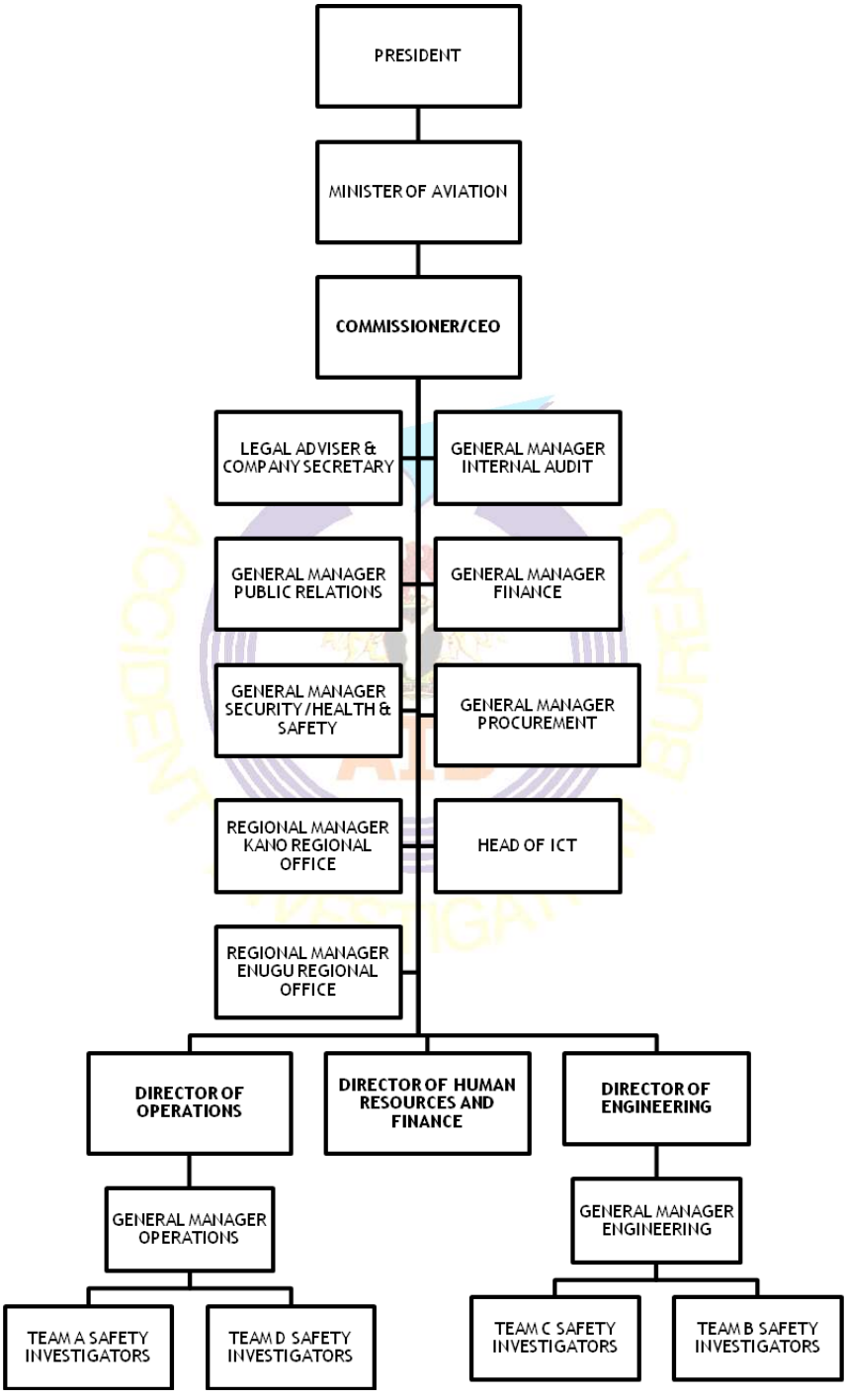

Figure 3-1: Organizational Chart of the Bureau

3.4.1 Vision and Mission Statements

Vision

To be one of the foremost accident investigation authorities in the world striving towards improved aviation safety.

Mission

To carry out qualitative and timely investigations using competent aviation professionals applying best practices.

3.4.2 Overview of the Bureau

The Accident Investigation Bureau (AIB) was established under the Civil Aviation Act 2006. Its primary function is to improve aviation safety. It does this by investigating civil aviation occurrences within Nigerian territory in order to identify and communicate factors that affect, or might affect aviation safety.

The Act makes it clear that, in carrying out its purpose, the Bureau cannot apportion blame, assist in determining liabilities or, as a general rule, assist in court proceedings. Its sole focus remains the prevention of future accidents and the improvement of safety.

The Bureau is responsible to the President and Commander-In-Chief of the Armed Forces of the Federal Republic of Nigeria through the Minister supervising civil aviation.

It is entirely separate and independent from the aviation regulator (NCAA), judicial authorities, policy makers and service providers. It is one of the parastatals under the Federal Ministry of Aviation. Other parastatals under the ministry are:

a) Federal Airports Authority of Nigeria (FAAN);

b) Nigerian Airspace Management Agency (NAMA);

c) Nigerian Civil Aviation Authority (NCAA);

d) Nigerian College of Aviation Technology (NCAT); and

e) Nigerian Meteorological Agency (NiMET).

The Bureau works cooperatively with the aviation industry, regulators and governments at state, national and international levels to improve safety standards. It also fosters cooperation with equivalent bodies in other countries and international organizations with responsibilities for worldwide aviation safety standards.

In order to cultivate a strong reporting culture within the industry, the Bureau promotes an appropriate level of confidentiality and protection for sensitive safety information provided to it in the course of its work.

3.4.3 Objectives of the Bureau

The fundamental objective of the Bureau is to prevent accidents or incidents (improve aviation safety) by determining the circumstances and causes of air accidents and serious incidents, and providing safety recommendations intended to prevent recurrence of similar accidents. The purpose of this shall not be to apportion blame or liability or to determine administrative, civil or criminal liability.

The fundamental objective of the Bureau is achieved through the following:

a) Conducting thorough, impartial, systematic and timely investigations

b) Identifying safety issues clearly and objectively without attributing blame or liability

c) Ensuring the significance of causal and contributory factors is clearly understood by all concerned

d) Promoting effective safety action

e) Harnessing expertise and information necessary to its safety role

f) Focusing its resources in the areas that are most likely to result in safety improvement

3.4.4 Purpose of the Bureau

The Bureau is an independent statutory agency of the Federal Government of Nigeria saddled with the responsibility of investigating air accidents and incidents. It is governed by the Commissioner/CEO assisted by the Directors and other members of management team. The Commissioner/CEO reports to the President and Commander-in-Chief of the Armed Forces of the Federal Republic of Nigeria through the supervising Minister of Aviation.

In addition to the improvement of safety, its purpose includes gaining public confidence by:

a) Ensuring that accidents are thoroughly and independently investigated leading to preventive measures;

b) Safety data recording, analysis and research; and

c) Fostering safety awareness, knowledge and action.

Moreover, the Bureau is set-up to fulfill Nigeria's international obligations under Annex 13 of the Convention on International Aviation.

3.4.5 Functions of the Bureau

The Bureau performs its functions in accordance with the provisions of the Civil Aviation Act and, where applicable, relevant international agreements. It is responsible for investigating air accidents and incidents in Nigeria, as well as participating in international investigations involving Nigerian registered aircraft or where Nigeria is the State of operator.

The key functions of the Bureau are to:

a) Receive, assess, determine and classify occurrence reports, including notifications of aviation occurrences

b) Independently conduct 'no-blame' investigations of accidents and incidents according to the laws, regulations and international best practices

c) Determination of the causes and/or contributory factors

d) Prevent future accidents (Annex 13 objective) by identification of safety deficiencies and issuance of safety recommendations where appropriate

e) Fulfill Nigeria's obligations under the Convention on International Civil Aviation (Annex 13 Standards and Recommended Practices)

f) Compilation, completions and publication of Final reports of accidents and incidents

g) Encourage safety action in response to safety factors by acknowledging safety action taken by operators/manufacturers, and by issuing safety recommendations

h) Raising awareness of safety issues by reporting publicly on investigations and conducting educational programmes

i) Gain public trust that accidents are thoroughly and independently investigated leading to preventive measures

j) Monitor investigations by others of significant incidents (judicial, NCAA, Airlines, etc)

k) Update legislation, regulations, policies and procedures

l) Obtain resources and develop expertise

m) Cooperate with the Authority to maintain database of the voluntary non-punitive incident reporting system

n) Coordinate with other local authorities (military, police, airport authority, ATC service provider, search and rescue, judiciary, airline, maintenance facilities, hospitals, etc)

o) Liaise with ICAO, other States and aviation industry

p) Conduct research and safety studies on air safety data for accident prevention purposes and to maintain relevant statistics

q) Advise Minister on aviation safety matters

3.4.6 Structure of the Bureau

The Bureau is comprised of three Directorates namely; Operations, Engineering and Human Resources and Finance with a number of functional units. Each Directorate is headed by a Director.

The workings of the Bureau are such that there cannot be clear departmental divisions between the Operations and Engineering Directorates; and as such duties may be allocated to Air Safety Investigators (ASIs) across the two directorates depending on the requirement and expertise available.

3.4.6.1 Duties of the Directorate of Engineering

Refer to the Bureau's Engineering Guidance material for further details.

The Directorate of Engineering performs the following duties in during an investigation:

a) Collation of aircraft maintenance information

b) Retrieval of flight recorders

c) Documentation of accident site

d) Conduct wreckage mapping

e) Identification of fractured parts of aircraft

f) Obtain fuel, fluid and oil samples for analysis

g) Carryout engineering laboratory tests

h) Identification of airworthiness deficiencies

i) Identification of metallurgical failures

j) Carryout power plant investigation

k) Carryout aircraft structures and systems investigation

l) Carryout flight recorder read-out and analysis

m) Carryout testing of components, including engine teardown

n) Drafting the parts covering technical engineering subjects of the Preliminary and Final Report

o) Conduct Safety Recommendation Follow-up

p) Conduct safety studies

3.4.6.2 Duties of the Directorate of Operations

Refer to the Bureau's Operations Guidance material for further details.

The Directorate of Operations performs the following duties during an investigation:

a) Conduct flight operations investigation

b) Collation of crew information

c) Collation of ATS information

d) Collation of Aerodrome information

e) Collation of weather information

f) Documentation of cockpit area

g) Collation of history the flight

h) Collation of the performance /weight and balance information, including cargo manifest

i) Collation of operations manuals/ documents

j) Interviewing eyewitnesses, including relevant personnel

k) Identification of deficiencies in aircraft operations

l) Establish notification contacts with all interested parties an and outside Nigeria

m) Carryout flight recorder read-out and analysis

n) Coordinate the medical and autopsy investigation

o) Coordinate human factor and psychological investigation aspects of the accident

p) Drafting of flight operations parts of the preliminary and final report

q) Conduct Safety Recommendation Follow-up

r) Conduct safety studies

3.4.6.3 Directorate of Human Resources and Finance

In addition to his administrative and personnel duties, this Directorate handles the process of travelling logistics of officers and ASIs. The exigencies will require that the officer/ASIs may have to proceed at short notice.

3.4.6.4 Regional Offices

The following procedure/guidelines are applicable to the functioning of the regional offices:

a) Commissioner/CEO appoints a Regional Manager, who shall be the most senior Air Safety Investigator in the regional office;

b) Regional Manager shall report to the Commissioner/CEO on all matters;

c) Regional offices shall not perform functions except those prescribed by the Commissioner/CEO;

d) Regional offices shall keep copies of the Policy and Procedures Manual, Accident/Serious Incident Reporting Forms, Civil Aviation (Investigation of Air Accidents and Incidents) Regulations and other Regulations, Engineering/Operations Guidance Materials, Accident/Incident Files, other relevant publications etc.

e) All trainings shall be coordinated from the Headquarters (HQ).

f) The Leave Rosters of the Safety Investigators in the regional offices should be submitted to Headquarters ((HQ) at the beginning of the year. This is to enable deployment of relief officers to the regional officers as necessary.

g) Posting of Safety Investigators to the regional offices may normally be reviewed every two years.

h) Technical audit of the regional offices will be conducted at least once every year to ensure procedures are adhered to.

3.4.6.5 Investigation Personnel Cadres

The table 3.1 below contains the various investigative designations and their assigned job descriptions.

S/N	DESIGNATION	LEVEL	JOB DESCRIPTION
1	Air Safety Officer (ASO) II – Trainee position	08	i. Formal classroom training and OJT ii. Collation of crew and maintenance information iii. Introduction to accident investigation procedures iv. Other field assignments
2	Air Safety Officer (ASO) I – Trainee Position	09	i. On – the - Job Training (OJT) ii. Further introduction to accident investigation and sitting-in personnel interview iii. Assisting in information gathering on accident sites iv. Other field assignments on accident site
3	Air Safety Investigator (ASI) IV	10	i. Collation of measurements at the scene of accidents ii. Preparing runway layouts and other schematic drawings iii. Assisting in information gathering at site of accidents iv. Assisting senior officers on site of accidents v. Assist in preparing wreckage distribution
4	Air Safety Investigator (ASI) III	12	i. Under-taking responsibilities for office assignments and assembling information in report preparations ii. Shall be responsible for all measurements at the scene of accident iii. Searching for and identification of fractured parts of aircraft iv. Participate in engineering laboratory assignments v. Plotting of wreckage trail charts. vi. Assisting with other investigators on-site jobs.

5	Air Safety Investigator (ASI) II (Operations or Engineering)	13	i. Collation of measurements at the site of accident ii. Assist in information gathering at site of accidents iii. Participate in airframe and structure failure inspection iv. Participate in power plant investigation v. Observing evidence of Airworthiness
6	Air Safety Investigator (ASI) I (Operations or Engineering)	14	i. Shall work directly with the Assistant General Manager Engineering or Operations ii. Retrieving Tower recordings and transcripts iii. Assist in transcribing recordings iv. Eyewitness interview v. Documenting airworthiness deficiencies vi. Documenting operations lapses vii. Documenting metallurgical failures
7	Air Safety Investigator (ASI)/Assistant General Manager - AGM (Operations)	15	i. Carryout operations investigation ii. Lead eyewitness interviews iii. Participate in CVR read-out and analysis iv. Supervise notification of interested parties

Table 3.1 Job descriptions for air safety investigators

S/N	DESIGNATION	LEVEL	JOB DESCRIPTION
8	Air Safety Investigator (ASI)/Assistant General Manager - AGM (Engineering)	15	i. Lead system team ii. Participate in power plant investigation iii. Participate in airframe and structure failure inspection iv. Lead metallurgical inspection shop v. Participate in flight recorder read-out and analysis
9	Deputy General Manager - DGM (Operations) – reports to General Manager (Operations)	16	i. Lead Operations Unit of the Bureau ii. Assist in the administrative duties iii. Take charge of Cockpit Voice Recorder iv. Coordinate special interest groups from outside the country v. Coordinate medical and autopsy investigation vi. Coordinate Search and Rescue operation vii. Coordinate Human Factor and Psychological aspects of the accident viii. Coordinate with Police interest, if any ix. Preparing the preliminary reports of accident
10	Deputy General Manager - DGM (Engineering) – Reports to General Manager (Engineering)	16	i. Lead Engineering Unit of the Bureau ii. Lead aircraft system investigations iii. Take charge of Flight Data Recorder iv. Coordinate Fire Department's operations v. Coordinate special interest groups from outside the country vi. Coordinate forensic investigation with the Nigerian Police, if necessary vii. Preparing the preliminary reports of accidents

11	General Manager - GM (Operations) – Reports to Director of Operations	17	i. Deputise for the Director ii. Assist in planning for the Directorate iii. Assist in effectiveness of the Directorate's administration iv. Assist in coordinating the Directorate v. Liaison with other accident investigation authorities vi. Liaison with ICAO on Operations matters vii. Assist in overseeing the FDR/CVR readout analysis viii. Assist in overseeing and editing aircraft accident reports
12	General Manager - GM (Engineering) – Reports to Director of Engineering		i. Deputise for the Director ii. Assist in planning for the Directorate iii. Assist in effectiveness of the Directorate's administration iv. Assist in coordinating the Directorate v. Liaison with other accident investigation authorities vi. Liaison with ICAO on airworthiness matters vii. Assist in overseeing the FDR/CVR readout analysis viii. Assist in overseeing and editing aircraft accident reports

Table 3.1 Job descriptions for air safety investigators (Cont…)

S/N	DESIGNATION	LEVEL	JOB DESCRIPTION
13	Director of Operations (DOO) – Reports to the Commissioner/CEO		i. Planning for the Directorate ii. Seeing to the effectiveness of the Directorate's administration iii. Coordinating activities of the Directorate iv. Liaison with other accident investigation authorities v. Liaison with ICAO on Operations matters vi. Liaison with the Commissioner in briefing the Honourable Minister of Aviation vii. Overseeing the FDR/CVR readout analysis viii. Overseeing flight recorder laboratory ix. Coordinating notification to other accident investigation authorities x. Coordinating MOUs with other agencies and authorities xi. Overseeing and editing aircraft accident reports
14	Director of Engineering (DOE)- Reports to the Commissioner/CEO		i. Planning for the Directorate ii. Seeing to the effectiveness of the Directorate's administration iii. Coordinating activities of the Directorate iv. Liaison with other accident investigation authorities v. Liaison with ICAO on airworthiness matters vi. Liaison with the Commissioner in briefing the Honourable Minister of Aviation

			vii. Overseeing component testing, including engine teardown viii. Overseeing wreckage hangar and material laboratory ix. Coordinating safety recommendation follow up x. Overseeing and editing aircraft accident reports
15	Commissioner/CEO (CCEO) – Reports to the President and Commander-in-Chief through the Minister		i. Officer In Charge of the Bureau's administration ii. Responsible for staff training and the planning of the Bureau iii. Shall play the role of an assessor in all public inquiries iv. Shall play the role of the Bureau's Accredited Representative at accidents outside the Nigerian boundaries v. Shall inter-act with Aircraft Operators and Government Agencies on implementation of aviation safety recommendations vi. Responsible for final editing and publication of accident reports vii. Responsible for all public briefings viii. Responsible for assigning duties to officers of the Bureau as the need arises

Table 3.1 Job descriptions for air safety investigators (Cont…)

3.4.7 Funding of Investigations

In line with ICAO Manual of Accident and Incident Investigation (Doc. 9756), the Bureau shall have sufficient funds to enable it properly conduct aircraft accidents and incidents investigation within its areas of responsibility.

The Civil Aviation Act enumerates the sources of funding for the Bureau, including budgetary allocations from Federal Government.

The Bureau shall request supplementary funding from Federal Government when the need arises in major accident investigations.

3.5 SUMMARY

It is the policy of the Bureau and its investigation teams to meet the requirements specific to this chapter to ensure that the sole purpose of investigations is to prevent future accidents. Any judicial or administrative proceedings to apportion blame or

liability shall be separate from the Bureau's investigations. The Bureau and its investigation teams shall have functional independence in the conduct of an investigation and unrestricted authority over its conduct, with the intent that any appointed investigation team can withstand interference or pressure from any source.

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4.0 PLANNING AND PREPARATION FOR INVESTIGATION

4.1 GENERAL

In order to conduct proper investigations, the managers and Safety Investigators of the Bureau must be fully prepared and must have a plan of action before an accident or incident occurs. Pre-investigation planning and preparedness involves several elements, including a plan for staffing key positions on an investigation team. Other considerations include Memoranda of Understanding (MoU) with other Nigerian government and aviation industry organizations, as well as aircraft accident investigation authorities in other States, as a means to obtain assistance in the form of qualified Safety Investigators, specialists and facilities when required. It is important to have temporary arrangements in place for the secondment of additional staff from other Nigerian government and industry organizations under some circumstances. Such external experts should be relieved of their regular duties for the duration of the investigation or as applicable, so as to avoid possible conflict of interests. It is also important to provide adequate training of personnel and to provide the appointed Safety Investigators with the necessary tools, investigation equipment and personal protective equipment in order to meet health and safety requirements.

Proper planning and preparedness are essential in facilitating the prompt arrival of Safety Investigators at an accident site and have considerable bearing on the efficiency of the investigation.

4.2 THE SELECTION AND APPOINTMENT OF SAFETY INVESTIGATORS

It is the policy of the Bureau to follow the guidance contained in ICAO Circular 298 regarding selection, appointment and training of Safety Investigators as detailed in the Bureau's Investigation Training Manual.

Air Safety Investigators of the Bureau are issued government credentials, which specify the legislative and regulatory basis for their authorities and responsibilities. The credentials contain the Safety Investigators' photographs and provide the legal basis for their work during investigations of accidents and incidents.

The Bureau has agreements with the aircraft accident and incident investigation authorities in other States to call upon other experts for assistance on very short notice and without having to establish formal agreements and arrangements at the time of the need of such assistance. Appendix C contains copies of current MoUs.

As part of its management plan, the Bureau maintains a list of qualified Air Safety Investigators who are appointed to key positions to form Go Team.

4.2.1 Background Experience for Investigators

In accordance with guidelines provided by ICAO Circular 298, aircraft accident investigation is a specialised task which should only be undertaken by qualified investigators. As such the Accident Investigation Authority should train appropriately qualified personnel in the accident investigation techniques required to participate in or to conduct an aircraft accident investigation. When assigned to an accident investigation, such personnel should be relieved of their regular duties for the duration of the investigation.

Potential accident investigators must have considerable practical experience in aviation as a foundation on which to build their investigation skills. This experience can be acquired from civil or military qualification as a pilot, aeronautical engineer or aircraft maintenance engineer. Personnel qualified in flight operations, airworthiness, air traffic management, or aviation related management might also be suitable for accident investigator training. Since accident investigations will often involve specialised areas, it is important that those selected for training as investigators understand the aviation infrastructure and are able to relate to the many different areas of aviation.

Normally, a small team or even a single investigator conducts the investigation of an accident involving a general aviation or small commuter aircraft. In these investigations, it is desirable for an operations investigator to have some technical experience and for an engineering investigator to have some experience as a pilot. In addition, the investigators should have a comprehensive understanding of the interrelationship of each of the supporting services that are necessary to operate an aircraft in the aviation environment.

Since the outcome of an accident investigation is largely dependent upon the aviation knowledge, skills and experience of the assigned aircraft accident investigators, they should have:

a) an understanding of the depth of investigation that is necessary in order for the investigation to conform with the legislation, regulations and other requirements of the State for which they are conducting the investigation;
b) a knowledge of aircraft accident investigation techniques;
c) an understanding of aircraft operations and the relevant technical areas of aviation;
d) the ability to obtain and manage the relevant technical assistance and resources required to support the investigation;
e) the ability to collect, document and preserve evidence;
f) the ability to identify and analyse pertinent evidence in order to determine the causes and, if appropriate, make safety recommendations; and
g) the ability to write a final report that meets the requirements of the accident investigation authority of the State conducting the investigation.

In addition to technical skills and experience, an accident investigator requires certain personal attributes. These attributes include integrity and impartiality in the recording of facts; ability to analyse facts in a logical manner; perseverance in pursuing inquiries, often under difficult or trying conditions; and tact in dealing with a wide range of people who have been involved in the traumatic experience of an aircraft accident.

An accident investigator is desirous to have investigation management qualification and skills in team management, relations with numerous State authorities and private organizations, international relations, communication and report writing.

4.2.2 Investigator Qualification Requirements

4.2.2.1 Investigator Qualifications – New Hire

Aircraft Accident Investigators conduct highly technical work and occupy sensitive and authoritative positions as representatives of the AIB and the Federal Government of Nigeria. It is essential that new investigator candidates meet the highest standards of competence and integrity.

The minimum requirements for new-hire investigators who are selected as new hires are provided below. While not absolute, these qualifications and experience requirements provide important guidelines for initial employment of new investigators. The minimum requirements for new-hire Investigators who are selected as new hires are provided below. While not absolute, these qualifications and experience requirements provide important guidelines for initial employment of new investigators.

4.2.2.2 General Requirements for New Hires (All Investigators)

a) Broad air transport background of three years or more/relevant academic and technical education in related specialties.
b) Experience with the problems of operating or maintaining transport aircraft.
c) Meteorological and climatology knowledge and experience.
d) Experience in technical training including visual aids, training devices and aircraft flight simulators.
e) Reputation for possessing qualities of integrity, impartiality, perseverance, analytical prowess, initiative, tact, tolerance, good understanding of human nature, ability to get along well with people and patience.

In addition to these general requirements, the Bureau has also provided specific technical requirements for both Operations and Engineering Investigators in the below paragraphs.

4.2.2.3 Specific Technical Requirements for New Hires

1. **Engineering Investigators**
    a) Extensive academic and technical education (a minimum of university degree or equivalent in related engineering specialties e.g. aeronautical, mechanical, electrical, electronic, or telecommunication; or equivalent professional qualifications.
    b) For equivalent professional qualifications he should possess aircraft maintenance engineer's licenses with ratings or appropriate approvals, commensurate with his job responsibilities, i.e., License with airframe and power plant or Avionics ratings, flight engineer license, etc.).

c) For graduates, except for aeronautical engineers, they should have attended or been provided with a basic training in aircraft maintenance engineering.
d) Progressed through positions of increased technical and supervisory responsibility in the aviation industry.
e) At least ten (10) years of technical employment is normally required to obtain the minimum qualifications and experience needed to perform the duties of a basic starting position as an Engineering Investigator.

2. Operations Investigators

a) A minimum of secondary education certificate. Applicants with higher education such as a University degree or equivalent will be preferred.
b) Holds or have held a current professional license – ATPL. F/Engineer Licence.
c) Must possess a broad air transport background of a minimum of 10 years with not less than 5000 hrs as Pilot-In-Command (PIC) in military or civil aircraft.
d) Previous appointments either in operational management, as an airline pilot or training instructor, or as a military pilot where experience in air transport operations would have been acquired will be an advantage.
e) Must possess experience in technical training including visual aids, training devices and aircraft simulators;

OR

f) A minimum of secondary education certificate. Applicants with higher education such as a University degree or equivalent will be preferred.
g) Holds or have held a current professional license –Flight Engineer Licence.
h) Must possess a broad air transport background of a minimum of 10 years with not less than 3500 hrs in military or civil aircraft experience.
i) Previous appointments either in operational management or training instructor where experience in air transport operations would have been acquired will be an advantage.
j) Must possess experience in technical training including visual aids, training devices and aircraft simulators;

OR

k) A minimum of a university degree or equivalent in any of the physical sciences or Geography
l) Possess a Flight Dispatcher License and a broad air transport background of a minimum of 10 years experience in operations of air transport, military or civil.
m) Must possess experience in technical training program development including visual aids, design of procedures, instructional techniques, training devices, aircraft mock-ups and supervision.
n) Previous appointments either in operational management as an Operations manager or Training Instructor in air transport operations would have been acquired will be an advantage.

OR

o) A minimum of a university degree or equivalent in any discipline.
p) Holds or have held an professional Cabin Crew license with appropriate type ratings with at least 10 years of post license/rating experience.
q) Experience in technical training program development including visual aids, design of procedures, instructional techniques, training devices, aircraft mock-ups and supervision will be of advantage.

OR

r) A minimum of a university degree or equivalent in any of the physical sciences or geography.
s) Holds or have held a professional license with appropriate Air Traffic Controller (ATC) ratings and minimum of 10 years of post license/rating experience.
t) Must possess experience in technical training program development including visual aids, design of procedures, instructional techniques, training devices, aircraft mock-ups and supervision.
u) Previous appointments either in operational management as an ATC or training instructor, or as a Military ATC where experience in air transport operations would have been acquired will be an advantage.

4.2.2.4 Qualification Requirements for Investigator-In-Charge

Investigator-in-charge (IIC) must meet the following requirements:

a) A certified investigator by successfully completing Safety and Accident Investigations courses at recognized training institution as per the Bureau's Investigation Training manual

b) Effectively conducted at least two (2) investigations, including completion of the Final Reports on the accidents

Note.- Any person to be appointed Acting IIC must have met (a) above and must have completed at least one (1) investigation.

4.2.2.5 Selection of Go Team

A Go Team is a group of Safety Investigators, consisting of all required specialists who are on-call for immediate assignment to conduct investigations. Also, the Bureau will ensure that suitable arrangements can be made on short notice to enlist the necessary support staff from other organizations within the country.

A Go Team is a group of Safety Investigators who are on call for immediate assignment to conduct accident or incident investigation. The Go Team comprises of an IIC and a number of specialists depending on the magnitude of the occurrence. For accident involving a light aircraft or serious incident without serious injuries, the Go Team may comprise of just an IIC and one other Safety Investigator. However, for investigation of a major accident involving large transport aircraft, a full Go Team is required. This will be based on the probable scope of the investigation and the magnitude of the tasks, but will also include the following factors:

a) The number of injuries/fatalities;

b) Type of aircraft;

c) Previous accidents of this type;

d) Location of the accident;

e) Extent of aircraft or ground damage;

f) Weather;

g) Public interest; and

h) Specialist workloads.

A full Go Team may consist of the following specialists: air traffic control, operations, meteorology, human performance, structures, systems, Powerplants, maintenance records, survival factors, aircraft performance, cockpit voice recorder, flight data recorder and metallurgy. Additional groups may be formed to interview witnesses, examine the response of aircraft rescue and firefighting (ARFF) personnel, or other duties, as required to support the investigation. AIB specialists head each of the groups. IIC will be the overall chairman of the Go Team. AIB Safety Investigators on training will be assigned as members of investigative groups under the supervision of another experienced Safety Investigator, usually a group chairman or IIC.

The use of outside expertise is accomplished by written contracts and/or MoUs which include provisions to ensure that the seconded individuals are relieved of their regular duties during the course of the investigation. Their independence and objectivity in the investigation work is essential, and it is important to ensure there are no real or perceived conflicts of interest on the parts of seconded individuals. Seconded Safety Investigators should be given proper credentials and should sign written agreements to comply with country's laws, regulations, policies and procedures, and to demonstrate their independence and objectivity, and that there are no conflicts of interest during the period of the secondment.

Each Safety Investigator, as well as outside personnel used on a temporary basis, must be fully aware of their duties and responsibilities.

All personnel on call should arrange their personal affairs such that they are able to depart to the site of an accident with a minimum of delay. Personnel should always ensure that they can be reached when on call.

4.3 SAFETY INVESTIGATOR TRAINING

It is the policy of AIB to provide appropriate training to Safety Investigators consistent with international standards and best practices. In particular, the Bureau has developed a training programme (refer to the Investigation Training Manual) in line with the guidance provided in ICAO Circular 298, Chapters 3 and 4, which contains detailed information regarding the training of Safety Investigators in four phases:

a) Initial training.

b) On-the-job training.

c) Basic accident investigation courses.

d) Advanced accident investigation courses and additional training

e) Specialised training

f) Accident Site drills/ Crash Exercises

g) Attachment to accident investigations in other States

h) Attendance of safety and accident investigation seminars, workshops, conferences, etc

i) Management courses.

The Safety Investigator training programme also includes in-house indoctrination training, investigation management courses, specialised areas, crisis management (media, next-of-kin), attendance of seminars, workshops and conferences, review of investigation reports, crash exercises, attachment to foreign investigations, fitness and survival training, etc.

One means to determine and manage training needs, as well as monitor and evaluate the training needs and outcomes of training of the Bureau's staff, is through the use of an Individual Development Plan (IDP). IDP contains the required elements of a Safety Investigator's or manager's training programme. Based on an individual's job description and his/her background, experience, and training gained in the past, the need for additional training can be determined and monitored with the IDP, which would be completed for each staff member.

Each newly hired person possesses some knowledge, skills, and abilities applicable to the assigned tasks; however, the level from one person to another varies. For example, two highly qualified operations Safety Investigators could possess extensive flight operations background, but one may only have limited incident investigation experience, while the other may have considerable major accident investigation experience. Further, Safety Investigators require different levels of knowledge, skills, and abilities, depending on the investigation roles to which they may be assigned. The IDP is an excellent tool for identifying and managing these variables.

The IDP contains the basic requirements of knowledge, skills, and abilities that each person either must possess when hired, or must gain through a structured training programme. The IDP also provides a tool to manage and plan each person's training, including a means to project an annual training budget. Further, the IDP can be used to document the necessary steps to be taken for a person to be promoted to higher levels of responsibility, such as from Operations Safety Investigator to Safety Investigator-in-charge. The completed IDP for each person becomes the training record, which is filed along with supporting materials, such as certificates and other records of training and experience.

Refer to the Bureau's Investigation Training Manual for details.

4.4 SAFETY INVESTIGATOR EQUIPMENT

A. As part of its management plan, it is the policy of the Bureau to properly equip its managers and safety investigators with appropriate investigation equipment and protective equipment against biological, environmental and natural hazards that may be encountered at accident sites. The Bureau ensures that the technical investigation equipment to be used by the Safety Investigators at an accident site will be reviewed periodically. The equipment could include cameras, notebook computers, mobile telephones, tools, etc. Specialized equipment may need to be stored at the office or may have to be purchased as needed.

B. Advance consideration is given to such details as inoculations, travel documents (passport, Visas) requirements and travel facilities of accident Safety Investigators.

C. The Security, Health and Safety Unit is responsible for the determination, purchase, appropriate packaging, safe keep and distribution of all Safety Investigators' kits and safety equipment to users whenever the need to use them arises. This Unit is also responsible for ensuring adequate quantity of the kits and PPE are available and ready for deployment to sites all the time.

D. The designated member of staff of the Security, Health and Safety Unit Ensures the kits and equipment are packed in suitable containers for ease of carriage to the accident site without causing delay in case of an accident. He/ She should keep up-to-date the list of available kits and personal protective equipment. The location of the kits and the PPE should be made known to all Safety Investigators at anytime.

Refer to appendix G for the comprehensive list of Safety Investigators' equipment, including the Go-Kit, common use equipment and Biohazard protective kits.

Refer to appendix H for the guidance on how to use the personal protective equipment (PPE) against biological hazards at accident sites.

4.5 HEALTH AND SAFETY AT AN ACCIDENT SITE

A. Aircraft wreckage sites may expose safety investigators to certain risks including Biological hazards (blood borne pathogens), airborne hazards (vapors, smoke, dust from burnt composite materials, etc), physical hazards (adverse terrain, sharp or heavy objects, unstable wreckage, etc), dangerous goods (pressurized equipment, radio-active, flammable or toxic materials, etc), adverse weather conditions, etc.

B. Upon arrival at the site, the Bureau's Safety and Security Coordinator or IIC should liaise will coordinate with the local firefight or police to determine hazards at the site and safety resources available to the investigative staff. It is the responsibility of the safety Coordinator or IIC to conduct risk assessment of the accident site, which will identify possible hazards, and to determine the level of risk at the site. An environmental risk assessment can be conducted while en route and a more detailed assessment accomplished following the initial visit to the accident site. (See Appendix I for accident site hazard identification and risk assessment checklist AIB.01.06). The Safety Coordinator or IIC will then develop countermeasures to identified risks and ensure that the appropriate countermeasures are applied at the

accident site. All team members should be advised to be on the alert for any undeclared hazardous material and, if such material is found, should immediately notify a group chairman or the IIC so that appropriate measures can be taken.

C. ICAO Circular 315, *Hazards at Aircraft Accident Sites,* contains detailed guidance on managing occupational health risks in aircraft accident investigation, including the various categories of hazards associated with accident and incident investigation. The Bureau uses the generic operational safety planning guide contained in Chapter 4 of Circular 315, as well as the operational safety plan/site assessment tool contained in Appendix A to Chapter 4 of Circular 315, and the personal protective equipment guide contained in Appendix B to Chapter 4 of Circular 315.

D. The site of aircraft accident may contain blood borne pathogens. Blood borne pathogens are viruses, bacteria, and parasites that are present in the blood, tissue, or other body fluids of infected persons. They include, but are not limited to, Hepatitis B and C virus (HBV) and the Human Immunodeficiency Virus (HIV), which causes AIDS, some of these viruses do not die upon contact with oxygen or when the fluids dry out. Studies, in fact, show that certain climatic conditions may prolong the infectiousness of HIV. Those who work in or around the wreckage must use extreme caution to minimize direct contact with blood borne viruses. At a minimum, heavy leather gloves over non-permeable rubber gloves should be used and in some case will be required when touching the wreckage. Under certain conditions, such as within the wreckage where investigators may come into contact with blood or human remains. Full face masks, protective goggles, and disposable overalls and booties shall be worn.

E. The Bureau has established a Security, Health and Safety Unit responsible for managing all issues relating to security, health and safety of Safety Investigators at accident sites. There are designated members of staff as the “accident site safety and security coordinators” responsible for accident site safety and security matters, and to oversee the personal protective equipment and its use.

F. The Investigator-in-charge (IIC) or the designated accident site safety and security coordinator should brief the investigation team on all known and potential hazards and should establish appropriate safety practices. The accident site safety and security coordinator should also ensure compliance with the provisions of this manual and other ICAO guidance material regarding health and safety of Safety Investigators during the course of investigations.

Note: If a specific accident site safety coordinator is not designated, another Safety Investigator, such as the IIC, chairperson of the structures group or another responsible person, should assume the duties of ensuring proper site safety and security.

G. The support of fire department and dangerous goods specialists should be enlisted, as necessary, to evaluate known and/or potential hazards, and to brief the investigation team, as appropriate.

H. All Safety Investigators who work among wreckage or travelling to an area with certain known public health risks or suspected disease will be given appropriate personal protective equipment against biological hazards, such as blood-borne pathogens. They will be immunized against the following:

a) Tetanus

b) Hepatitis A

c) Hepatitis B

d) Influenza

Records of the immunizations will be maintained for each Safety Investigator.

I. It is the policy of the Bureau to provide all Safety Investigators with initial and recurrent training on biological hazard protective equipment and procedures. Records of such training are maintained for each Safety Investigator in each Safety Investigator's IDP. Safety Investigators are aware of the potential hazards at an accident site and what precautions to take.

J. It is also the policy of the Bureau to ensure that all safety investigators and other personnel deployed to accident sites have received up-to-date inoculations, hepatitis immunization and appropriate Personal Protective Equipment (PPE)- refer to Appendix G.

K. The assigned Safety Coordinator and/or IIC will be responsible for conducting daily safety briefings with all individuals working at the accident site. The IIC shall monitor to ensure all personnel working at accident site display good conduct, judgment, use appropriate PPE as well as exercise caution.

L. During the IIC's opening statement, the IIC should state that the Bureau will neither assume responsibility for any personal injuries incurred during the course of an investigation by representatives of organizations participating in the investigation as a party or by authorized observer, nor will the Bureau provide PPE to party participants.

4.6 INVESTIGATORS FIELD SUPPORT FUNDS

In view of the nature and hazards associated with accident/incident investigations and the difficulties in accessing the terrain as may be required, the investigators shall be allowed such reasonable allowances as may be determined by the Commissioner/CEO in addition to their duty tour allowance..

4.7 COMMUNICATION EQUIPMENT

The Bureau has made available for use of investigators modern communications equipment and infrastructure to enable effective coordination during investigation. The under listed are the means of communication:

a) Mobile phones

b) Email

c) Website

d) Desktop intercom

e) Walkie-talkie

f) Fixed wireless telephones

4.8 TRAVEL ARRANGEMENT

The Bureau has made available sufficient support for much of the initial coordination effort necessary in terms of travel and hotel arrangement to launch the Go team. Whenever possible, the entire Go Team will travel together to the accident site.

Adequate operational vehicles are provided for this purpose where accident can be accessed faster by road. The vehicles should be kept in order and duty drivers ready for deployment at the shortest notice. The vehicles should have visible identification and anti collision lights installed.

If the distance to the site is beyond reasonable driving distance, commercial aircraft will be used to transport the team. Individual team members should make arrangement for their air tickets through the IIC as soon as possible to enable the team travel together. The IIC should make arrangement for the team to stay in the same hotel as well as the arrangement for local transportation logistics from the hotel to the accident site for the entire during of their stay.

The Bureau will arrange for a charter Air transportation where necessary. If space on the chartered aircraft is limited, team members should be selected according to the importance of accomplishing their duties during the first hours of the investigation. Give priority to group chairmen whose initial presence on site with the IIC is critical. Typically, the structures and systems group chairman is need to ensure oversight of on-site activities and the operations group chairman is needed to interact with airline personnel on site. IIC should ensure that all intended passengers on the chartered flight understand the proper reporting time to appear at the airport.

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5.0 INITIAL NOTIFICATION AND RESPONSE

5.1 GENERAL

This chapter contains policies and procedures pertaining to:

a) reporting requirements;

b) initial notification and reporting of aircraft accidents and incidents to civil aircraft that occur in Nigeria;

c) responses to initial notifications from other States regarding accidents and incidents that occur outside the country but involving interests of Nigeria; and

d) delegation in whole or in part of investigations.

Note.— It is the policy of Nigeria and the Bureau to comply with the provisions of ICAO Annex 13, Chapter 4 Notification*, regarding accidents and incidents occurring in* Nigeria*. Therefore, not all of the details contained in ICAO Annex 13, Chapter 4, are repeated herein.*

5.2 REPORTING REQUIREMENTS

Early notification is essential to initiate and organize the investigation. Initial information concerning the facts and circumstances of the occurrence will often be incomplete and erroneous. For this reason, early factual information transmitted for alerting purpose must be handled with considerable discretion. Parties notified are to be cautioned about the preliminary nature of the data.

The Bureau's reporting checklist AIB.01.02 (refer to appendix J) is an extracted from ICAO Annex 13, Attachment B. It specifies the various reporting requirements for different types of accidents and serious incidents. It is the responsibility of the Bureau on behalf of Nigeria to comply with the notification and reporting requirements of ICAO Annex 13 (Chapters 4, 6 and 7). All notifications and reports will be forwarded in English language.

A list of addresses of aircraft accident investigation authorities can be found in the ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Part I

Organization and Planning and on the ICAO FSIX website. (Chapters 10 and 11 of this manual contain additional reporting requirements.)

A list of "serious incidents" requiring notification is contained in Appendix D of this manual (reference ICAO Annex 13, Attachment C).

REPORTING CHECKLIST			
Notification — accidents and serious incidents			
From	For	Send to	ICAO Annex 13 reference
State of Occurrence	International occurrences: all aircraft	State of Registry State of Operator State of Design State of manufacture ICAO (when aircraft over 2 250 kg or is a turbo-powered aeroplane)	4.1
State of Registry	Domestic and other occurrences	State of Operator State of Design State of manufacture ICAO (when aircraft over 2 250 kg or is a turbo-powered aeroplane)	4.8

Table 5.1 Reporting Checklist

5.3 NOTIFICATION PROCEDURES

The Accident Investigation Bureau maintains a 24-hour-a-day Duty Officer each in Lagos and Abuja Offices to receive notifications of accidents and incidents. The Duty Officer uses hotline mobile phones for notifications from within the country and to/from other States. Other modern communications facilities such as email, website and AIB Mobile App are available as alternate systems in case the Duty Officer cannot be contacted for notifications. Paper copies of Aircraft Accident/Incident Reporting Form (AIB.001) are distributed to all Aircraft operators and owners in Nigeria for use to report accidents or incidents.

The Bureau will ensure that up-to-date contact and address information for reporting of accidents and incidents to the it is available to the relevant aviation organizations and personnel within Nigeria and to other States through ICAO by use of the ICAO website *(list of addresses for aircraft accident investigation authorities)*, as well as listed in the ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), *Part I, Chapter 4, Appendix 2*. The 24-hour contact information for the Bureau is also published on the its internet website for the benefit of the international aviation community.

5.4 RESPONSE TO NOTIFICATIONS

5.4.1 Domestic Investigations

A. Upon receiving a notification of an accident or incident in Nigeria, the Duty Officer should immediately contact the reporting source to ensure that all the required information has been provided, to determine who and what organizations may have been involved in the occurrence, to determine who else has been informed of the occurrence, and to determine which actions have already been taken in response to the occurrence.

He/she should alert the Commissioner/CEO, Director of Operations and Director of Engineering and follow the steps enumerated in the Checklist for Initial Actions after Notification (AIB.01.05) – refer to appendix K.

B. The Duty Officer should contact the airline operator to obtain further details on the aircraft, its occupants and contents of cargo, specifically to determine if there were dangerous goods on board. If dangerous goods are carried on board, details of the dangerous goods such as type, nature, identification, quantity, packaging, location and documentation should be forwarded to assigned Safety Officer and/or IIC.

C. The Duty Officer will coordinate the notification of interested parties such as airline operator, other Nigerian government agencies and relevant organizations, such as NCAA, NEMA, Search and Rescue, police, Road Safety, etc. and other involved States, such as the States of Registry, Operator, Design, and/or Manufacturer, in accordance with ICAO Annex 13, Chapter 4 *Notification*. Notification and reporting to ICAO are also addressed in Chapter 11 of this manual. The notification shall be made

with a minimum delay. The Duty Officer should use Reporting Checklist (AIB.01.02) in appendix J and Notification Form (AIB.01.03) in appendix L for this purpose.

D. The initial (and the amended initial) notification to other States and ICAO shall contain the following general information, if available, as per ICAO Annex 13, paragraph 4.2:

a) for accidents the indentifying abbreviation ACCID, for serious incidents INCID;

b) manufacturer, model, nationality and registration marks, and serial number of the aircraft;

c) name of owner, operator and hirer, if any, of the aircraft;

d) qualification of the pilot-in-command, and nationality of crew and passengers;

e) date and time (local time or UTC) of the accident or serious incident;

f) last point of departure and point of intended landing of the aircraft;

g) position of the aircraft with reference to some easily defined geographical point, and latitude and longitude;

h) number of crew and passengers; aboard, killed and seriously injured; others, killed and seriously injured;

i) description of the accident or serious incident and the extent of damage to the aircraft, so far as is known;

j) an indication to what extent the investigation will be conducted or is proposed to be delegated by the State of Occurrence;

k) physical characteristics of the accident or serious incident area, as well as an indication of access difficulties or special requirements to reach the site;

l) identification of the originating authority and means to contact the Safety Investigator-in-charge and the accident investigation authority of the State of Occurrence at any time; and

m) presence and description of dangerous goods carried on board the aircraft.

Note. – Absence of complete preliminary information on the accident should not cause delay in notification. Any omitted details and/or other known relevant information shall be dispatched to/by the Bureau as soon as they are available. The Bureau shall forward details omitted during initial notification as soon as it become available.

M. The following is an example of accident notification using AIB Form AIB.01.03 (see appendix L)

EXAMPLE OF A NOTIFICATION

Information required (ICAO Annex 13 paragraph 4.2)	Example
a) for accidents the identifying abbreviation ACCID, for serious incidents INCID	ACCID;
b) manufacturer, model, nationality and registration marks, serial number of the aircraft	Boeing 737-300, Nigeria, 5N-ABC, Serial no. 20280
c) name of owner, operator and hirer, if any, of the aircraft	Anyone Airlines ltd
d) qualification of the pilot-in-command, and nationality of crew and passengers	Captain, Crew: Nigeria; passengers: unknown
e) date and time (local time or UTC) of the accident or serious incident;	7th October 1983
f) last point of departure and point of intended landing of the aircraft	Lagos/ MMA- Abuja/ ABV
g) position of the aircraft with reference to some easily defined geographical point, and latitude and longitude[1]	12 km south of kabba, 7°49'27"N, 6°04"41"E, elevation 2200 m
h) number of crew and passengers; aboard, killed and seriously injured; others; killed and seriously injured;[2]	6 crew and 57 passengers aboard: all fatally injured; others: none;
i) description of the accident or serious incident and the extent of damage to the aircraft, so far as is known;	Aircraft collided with mountain side in the Lokoja area. Aircraft destroyed by fire
j) an indication to what extent the investigation will be conducted or is proposed to be delegated by the State of Occurrence;	Full investigation by the Accident Investigation Bureau-Nigeria
k) physical characteristics of the accident or serious incident area, as well as an indication of access difficulties or special requirements to reach the site	Mountainous area, difficult access, thick forest, wild animals
l) identification of the originating authority and means to contact the Safety Investigator-in-charge and the accident investigation authority of the State Occurrence at any time, and	Accident Investigation Bureau, Murtala Muhammed International Airport, Ikeja- Lagos, Nigeria. For additional information, contact the following telephone numbers: +234 807 709 0900, +234 807 709 0909, and e-mail address: commissioner@aib.gov.ng, info@aib.gov.ng
m) presence and description of dangerous goods carried on board the aircraft	None

Table 5.2 Completed Notification Form

[1] It may be helpful to provide the elevation of the accident site, if it is known.
[2] It is useful to first provide the number of persons aboard (crew, passengers) and then the injuries they sustained

N. When an accident occurs abroad to an aircraft registered in Nigeria and the State of Occurrence is not aware of it, or when the accident occurs in a non-contracting State, or outside the territory of any State, the Duty Officer shall forward notification of such accident to the State of Design, State of Manufacture and the Sate of Occurrence.

5.4.1.1 Selection of Go Team

A. Once the decision to launch Go Team members has been made by the Commissioner/CEO, the composition of the Go team must be determined immediately. The Commissioner/CEO or any officer assigned by him/her will select the Go Team members, including appointment of an IIC. An Air Safety Investigator with extensive experience will be appointed as IIC.

B. As the information about the nature of the accident is often incomplete and frequently erroneous at the time of the launch, there may not be sufficient information with which to make a final decision about the composition of the Go team. The Commissioner/CEO may request a particular specialist to join the Go Team. If his/her expertise is later considered to be unnecessary, he/she should be released by the IIC. Regardless of the circumstances, accidents involving large transport aircraft or new generation aircraft will normally be staffed with a full Go Team.

5.4.1.2 The Go Team Roster

A. The Go Team roster is a spreadsheet of names and telephone numbers of all Bureau's Safety Investigators, their group heads, the Directors, General Manager (Public Affairs), General Manager Security and Safety Unit and Regional Managers.

B. The Go Team members must prepare for immediate departure to the accident site. All Safety Investigators are 24-hour on call duty. All personnel on call should arrange their affairs such that they are able to depart for the site of an accident with a minimum delay not later than 2 hours. Safety Investigators should always ensure that they can be reached when needed.

Note. - The Commissioner/CEO is responsible for determining if an investigation will be lunched for serious incidents or incidents while taking into consideration of the possible safety lessons to be learnt and availability of resources to conduct the investigation.

5.4.1.3 Deployment to accident/ incident site

A. When notification of an accident reaches the Bureau, The Commissioner will dispatch Go Team to the accident site with minimum delay and by the quickest and available means of transportation. Safety Investigators should ensure that their Go kits and personal items are always available and ready to go.

B. The Duty Officer ensure travel arrangement, accommodation and Go kits are in place before the Go team embark on the journey to the site. The duty Officer will also obtain technical information about the aircraft and passed unto the IIC before departure of the Go Team to accident site. The IIC should use the My Go Bag/ Pre-launch Checklist (AIB.01.08) to ensure all tools, equipment and documentations to be used at accident site are available, packed in suitable containers before leaving office.

C. Personnel assigned to respond to the accident site are obliged to reach the site as quickly and as safely as possible and to remain at the site until properly relieved. AIB presence at this time is essential to convey to the news media, local authorities, and the public that the investigation is under AIB jurisdiction. The only information released to the media should be that the Go Team is on its way to the site, name of media contact person and when the Go team is expected to arrive. Initial activities, in addition to those listed herein, should be aimed at gathering as much pertinent information as possible to brief the Commissioner/CEO and Go Team upon arrival.

D. Upon arrival at the site, the IIC or assigned Safety Coordinator should take over the site from police or other law enforcement agents on ground and to conduct risk assessment of the site using the Checklist AIB.01.06 (refer to Appendix I) as quickly as possible. The IIC will also ensure that adequate measures are taken to safeguard the wreckage and also organize the investigative activities of the individuals/groups assigned to the investigation.

E. As soon as the safety of the site is guaranteed, on-site investigation shall commence. Safety Investigators shall carry out preliminary investigation into the circumstances leading to the accident/incident using the AIB Checklist. See Guidance Materials (Engineering and Operations).

F. Remoteness of the site or difficult accessibility does not diminish the need to establish Bureau's jurisdiction. Every effort should be made to get to the site, even if environmental conditions preclude remaining at the site for any appreciable length of time.

5.4.1.4 Coordination with Regional Offices

The location of the accident or incident determines the regional office to respond. As a general rule the regional office closest to the accident/incident site will dispatch Safety Investigators to the site, except when there are not enough personnel available for one reason or the other, or the accident site is not close to any regional office or the Commissioner/CEO specifically directs the inclusion of an Safety Investigator; in such case, Safety Investigators from another region will be sent to complement.

5.4.2 International Investigations

A. Upon receipt of an initial notification from another State about an accident or incident that occurred outside of Nigeria involving the country's interests (Nigerian -Registered, -Operated, -Designed, or –Manufactured aircraft), the Duty Officer shall acknowledge receipt. He/she should ensure that all the required information has been provided, to determine who and what organizations may have been involved in the occurrence, to determine who else has been informed of the occurrence, and to determine which actions have already been taken in response to the occurrence.

B. The Duty Officer shall inform the Commissioner/CEO immediately. The Commissioner/CEO will inform the interested parties (airline operator, NCAA, Ministry of Foreign Affairs and others) without much delay.

C. Regardless of whether the Bureau's Safety Investigators intend to travel for an investigation in another State, the Commissioner/CEO or any officer

designated by the CEO, shall appoint an Accredited Representative (ACCREP), who will gather relevant materials and records related to the flight, crew, or aircraft, or any other material that may be of use to the accident investigation authority in the other State. Such materials should be forwarded to the IIC of the other State in a secure and expeditious manner.

D. The Commissioner/CEO may request the airline operator and the NCAA to propose Advisers, who shall be technical specialists to assist the Accredited Representative. The names and contact details, as well the expected date of arrival, if the ACCREP and his team will travel to the State of Occurrence shall be provided to the State of Occurrence.

E. The Accredited Representative will contact the operations department of the Airline Operator by the quickest means available, using the template letter (refer to Appendix E) to collect information on the flight, crew and the aircraft involved in the accident or serious incident, including details of dangerous goods carried on board the aircraft. If dangerous goods are carried on board, the ACCREP should obtain as much information about the nature, identification, marking, quantity, packaging, location and documentation of the dangerous goods. All the information gathered shall be provided to the State of Occurrence or State conducting the investigation as soon as practicable.

Note.— The Accredited Representative for Nigeria is appointed to assist other States with their investigations shall be a qualified senior Safety Investigator from the Bureau, who understands the international investigation practices, particularly ICAO Annex 13, and who should represent the interests of the country during investigations led by other States. All advisers from Nigeria (AIB, NCAA, airlines, universities, military, etc.) shall be responsive to the leadership of the Accredited Representative.

F. The following are policy provisions of the Accident Investigation Bureau:

a) As soon as possible after an accident or incident in Nigeria, the Bureau will forward an accident/incident notification to the other States involved and, when applicable, to ICAO. The Bureau will also subsequently dispatch details omitted from the initial notification as well as other known relevant information.

b) The Bureau will forward notifications in a timely manner with all available information in clear concise language prepared in English.

c) The Bureau will acknowledge receipt of notifications of accidents and incidents from other States.

d) The Bureau will provide the State conducting the investigation with, as applicable, any relevant information regarding the flight, crew and aircraft involved in an accident or incident as soon as possible.

e) The Bureau will notify the State conducting the investigation whether it intends to appoint an Accredited Representative and, if so, provide the details about travel and other arrangements.

f) If the Bureau is aware of dangerous goods on board an aircraft that has an accident or incident, the Bureau will ensure that it notifies the State conducting the investigation with the details of dangerous goods on board the aircraft by the most suitable and quickest means available.

g) If during the course of an investigation, the Bureau becomes aware of, or suspects, unlawful interference (sabotage or other crime), the IIC shall immediately notify the Bureau's Head of Security and Safety of the Bureau. The Head of Security and Safety will immediately notify the Head of Aviation Security of the Nigerian Civil Aviation Authority (NCAA), being the appropriate authority of aviation security in Nigeria and the Inspector General of Police using the most suitable and quickest means available. This should be done in coordination with the Commissioner/CEO and the Bureau's Legal Adviser.

G. The Bureau will maintain a record of all transmissions of notifications sent, responses received, and any follow-up correspondence in a tracking file system linked to each accident/incident file for future reference and follow-up actions.

Note.— The Bureau will *take into account the provisions of ICAO Circular 285* Guidance on Assistance to Aircraft Accident Victims and their Families, *regarding notifications and other matters pertaining to assisting family members of accident victims.*

5.4.3 Appointment of Advisers

a) The Commissioner will request the Airline Operator/owner, organisation responsible for type design and the final assembly of aircraft to recommend an Adviser on the basis of his/her qualification and expertise to assist the investigation
b) The Airline Operator will submit the name and qualification of proposed Adviser to the Commissioner/CEO
c) The Commissioner/CEO or his designee appraises the credentials of the proposed Adviser
d) The Commissioner/CEO accepts the nominee to serve as Adviser to accompany the accredited representative

5.5 DELEGATION OF THE INVESTIGATION (IN WHOLE OR IN PART)

A. ICAO Annex 13, paragraphs 5.1 and 5.1.1, provide guidance that the whole or any part of an investigation of an accident or incident may be delegated by the State of Occurrence to another State or to a regional accident and incident investigation organization (RAIO), based on mutual arrangement and consent.

B. The Bureau Commissioner/CEO may, with the approval of the Minister, delegate the investigation of an accident or serious incident to another State or a regional accident investigation organization (RAIO) by mutual arrangement and consent. In such a case, the Bureau will facilitate to the best of its ability the investigation carried out by that State.

C. For occurrences in which Nigeria is the State of Occurrence, and involving aircraft operated, registered, designed and/or manufactured by other State(s), the Bureau may consider delegating parts of the investigation to an aircraft accident investigation authority in another State or to an RAIO, in order to facilitate a timely investigation. For example, for aircraft component examinations that must be conducted at facilities outside of Nigeria, the Bureau may delegate the oversight of the examinations to the accident investigation authority in another State. Whenever possible, the facility should not be the manufacturer, in order to avoid a real or perceived conflict of interest. However, there may be times when the only appropriate expertise or tooling will be at the manufacturer's facility, so it will be necessary to ensure Safety Investigator supervision of the work.

D. For occurrences in which Nigeria is the State of Occurrence, and request is received from the State of Registry, or Sate of Operator, or State of Design, or Sate of Design that the wreckage, its contents and any other evidence remain undisturbed pending inspection by an accredited representative of the requesting State, the Bureau shall take all necessary steps to comply with such request to the extent possible, provided that the wreckage and perishable evidences are secured to prevent destruction by persons, animals, fire, rain, wind or other causes.

Note.— ICAO Annex 13, paragraph 5.1, Note 2, urges that, "When the whole investigation is delegated to another State or regional accident investigation organization, such a State is expected to be responsible for the conduct of the investigation, including the issuance of the Final Report and the ADREP reporting. When a part of the investigation is delegated, the State of Occurrence usually retains the responsibility for the conduct of the investigation."

E. For occurrences over international waters involving in-flight damage or in-flight injuries to occupants of Nigerian-registered aircraft that lands in another State, the Bureau may delegate the whole or part of the investigation to the other State, or to a regional investigation organization, upon mutual arrangement and consent.

F. The general spirit of ICAO Annex 13 is cooperation between States during investigations. Hence, timely communications, sharing of information, and sharing of investigative tasks between States using the authority to delegate the whole or part of any investigation foster such cooperation. It is the policy of the Bureau to comply with this spirit of cooperation.

5.6 GUIDANCE ON CONDUCTING FLIGHT RECORDER REPLAY AND ANALYSIS AT FACILITIES OF OTHER STATES

5.6.1 Initial response

A. Although the Bureau has established its own flight recorder laboratory for the conduct of flight recorder readout, replay and analysis, should the recorders sustain damage in such a way that they cannot readily be read out at its laboratory, or are of a type that requires additional expertise or equipment (such as Russian-built flight recorders), the Bureau will make necessary arrangement to carry out the read-out at an appropriate flight recorder read-out facility of another state with recorder read-out capabilities, in accordance with guidance provided in ICAO Annex 13, Attachment D- *Guidelines for Flight Recorder Read-out and Analysis*.

B. It is essential that flight recorders be read out as early as possible after an accident. Early identification of problem areas can affect the investigation at the accident site where evidence is sometimes transient. Early identification of problem areas may also result in urgent safety recommendations which may be necessary to prevent a similar occurrence. Refer to the Bureau's FDR and CVR Policy Manuals.

C. In some cases, the recorder may need to be taken to its manufacturer for read-out. In such cases, the work will normally be supervised by our Safety Investigator, or a Safety Investigator from another State to ensure that there is no real or perceived conflict of interest.

5.6.2 Choice of facility

Facilities for the read-out of flight recorders should have the ability to:

a) Disassemble and read-out of the flight recorders that have sustained substantial damage;

b) Playback the original recording/memory module without the need for the use of a manufacturer's copy devices or the recorder housing that was involved in the accident or incident;

c) Manually analyse the raw binary waveform from digital tape flight data recorders;

d) Enhance and filter voice recordings digitally by means of suitable software; and

e) Graphically analyse data, derive additional parameters not explicitly recorded, validate the data by cross-checking and use other analytical methods to determine data accuracy and limitations

5.6.3 Participation by the State of Manufacture (or Design) and the State of the Operator

A. The Bureau understands that the State of manufacture (or Design) has airworthiness responsibilities and the expertise normally required to read out and analyse flight recorder information. Since flight recorder information can often reveal airworthiness problems, it is expected that the State of manufacture (or Design) should have a representative present when the flight recorder read-out and analysis are being conducted in a State other the State of Manufacture (or Design).

B. The Bureau also understands that State of the Operator has regulatory responsibilities regarding the flight operation and can provide insights into operational issues which may be specific to the operator. Since flight recorder information can reveal operational problems, it is expected that the State of the Operator should also have a representative present when the flight recorder read-out and analysis are being conducted.

5.6.4 Procedures for the flight recorder read-out

The flight data recorder and the cockpit voice recorder should be read out by the same facility, because they contain complementary data which can help validate each recording and aid in determining timing and synchronization.

The flight recorders should not be opened or powered up and original recordings should not be copied (particularly not by high-speed copy devices) prior to the read-out because of the risk of damage to the recordings.

The facility at which the flight recorders are read out for another State should be given an opportunity to comment on the Final Report in order to ensure that the characteristics of the flight recorder analysis have been taken into consideration.

The facility at which the flight recorders are read out may require the expertise of the aircraft manufacturer and the operator in order to verify the calibration data and validate the recorded information.

The Bureau will leave the original recordings, or a copy of them, with the read-out facility until the investigation is completed, in order to facilitate the timely resolution of additional requests or clarifications, providing that the facility has adequate security procedures to safeguard the recordings.

6.0 INVESTIGATION POLICIES AND PROCEDURES

6.1 GENERAL

A. This chapter of the manual contains general policies and procedures of the Accident Investigation Bureau that are consistent with the requirements and guidance provided by ICAO, as well as the best practices of the accident investigation agencies in some other States. The Civil Aviation Act and the Civil Aviation (Investigation of Air Accidents and Incidents) Regulations, provide the legislative and regulatory basis for the policies and procedures contained herein. Many of the following policy and procedural matters are taken directly from ICAO documents and have been accepted by the Bureau as its own.

Refer to the Bureau's Flight Data Recorder Policy and Cockpit Voice Recorder Policy documents for details on flight recorders.

B. It is the policy of the Bureau to institute an investigation into the circumstances of all aircraft accidents and incidents falling under the authority and responsibilities entrusted to it by the government. Such investigations should be conducted in accordance with the provisions of ICAO Annex 13 and Nigerian laws and regulations.

C. The Bureau will be involved in civil aircraft accident/incident investigation in the following circumstances:

a) Where the accident or serious incident occurs within the territory of Nigeria irrespective of the nationality of the aircraft;

b) Where the accident or serious incident occurs in another State or non-Contracting State involving a Nigerian registered aircraft or an aircraft operated by Nigerian Air Operator, and the State of Occurrence is conducting an investigation of the occurrence by providing all information required and appointing accredited representative and advisers. If Nigeria, having suffered fatalities or serious injuries to it citizens, the Bureau will appoint an expert to participate in the investigation;

c) Where the accident or serious incident occurs in any non-Contracting State and involves a Nigerian registered aircraft or aircraft operated by Nigerian Operator, and the non Contracting State involved does not intend to conduct an investigation in accordance with Annex 13, Nigeria will institute an investigation;

d) Where the accident or serious incident involves a Nigerian registered aircraft or an aircraft operated by a Nigerian Operator and the investigation has been delegated to Nigeria by another State by mutual arrangement and consent;

e) Where the accident or serious incident occurs in international waters or at a location which cannot be definitely established as being in the territory of any State and involves Nigerian registered aircraft. If Nigeria is the State of the Operator and the State of registry is conducting an investigation into the occurrence, the Bureau will appoint accredited representative and advisers;

D. It is the policy of the AIB to determine the extent of the investigation and the procedures to be followed in carrying out such an investigation, depending on the lessons it expects to draw from the investigation for the improvement of safety. The scope and complexity of the investigation and the size and composition of the investigation team should be influenced by the following factors, among others:

i. injuries, deaths and damage to equipment, third parties and the environment;

ii. identified and potential safety issues underlying the occurrence;

iii. the likelihood of recurrence, the probability of adverse consequences, and the severity of adverse consequences;

iv. accident and incident history related to the type of operation, size and type of aircraft, the operator, manufacturer, regulator, etc.; and

v. actual and potential deviations from industry safety and operational regulations, standards, procedures, and practices.

E. It is the policy of the Bureau to conduct investigations and complete reports for all accidents and incidents, including the type of serious incidents listed in ICAO Annex 13, Attachment C. It may also conduct selected investigations of other incidents not listed in ICAO Annex 13.

Note. — The Bureau has an arrangement (MoU) with the Nigerian Civil Aviation Authority (NCAA) *to be notified of all occurrences (accidents and incidents), including air traffic and mechanical failure incidents, so that the Bureau can determine if it should conduct an independent investigation. Most of the incident notifications should be generated by the NCAA mandatory occurrence reporting (MOR) system.*

F. Upon notification of an occurrence that falls under the jurisdiction of the Bureau, the Commissioner/CEO will immediately institute an investigation team, including appointing an IIC and additional experts, as required. The appointed experts will be comprised of aircraft accident investigation specialists, who have adequate expertise, training, and experience to ensure a thorough investigation.

G. The Bureau may consider calling upon an aircraft accident investigation authority of another State for assistance on the basis of mutual agreements. The Bureau may further consider proposing the delegation of the whole investigation or parts thereof to an aircraft accident investigation agency in another State, or a regional accident investigation organization, should the circumstances of an occurrence so warrant.

H. If during the course of an investigation, the Bureau becomes aware of, or suspects, unlawful interference (sabotage or other crime), the IIC shall inform the Head of Security and Safety of the Bureau, who in turn will immediately notify the Head of Aviation Security of the Nigerian Civil Aviation Authority (NCAA), being the appropriate authority of aviation security in Nigeria and the Inspector General of Police using the most suitable and quickest means available. This should be done in coordination with the Commissioner/CEO and the Bureau's Legal Adviser. The Bureau will continue the safety investigation to the extent necessary, parallel with any criminal investigation will furnish requested assistance to judicial authorities and will complete a Final Report of the occurrence, in accordance with ICAO Annex 13, keeping in mind continued cooperation with the judicial authorities. The IIC should explain the Bureau's procedures and the criticality of preserving and documenting certain forms of evidence. If any problems are encountered in this type of accident investigation, the Bureau's Legal Adviser should be consulted.

I. If an accident/incident occurrence being investigated by the Bureau has a flight data recorder (FDR) or cockpit voice recorder (CVR), or both, it will make immediate arrangements to recover and protect the flight recorders. The Bureau will carry out the read-out of the recorders as soon as practical at its safety laboratory. Should the Bureau face difficulty in conducting the read-out at its laboratory, it will make necessary arrangement to carry out the read-out at an appropriate flight recorder read-out facility. It is essential that flight recorders be read out as early as possible after an accident. Early identification of problem areas can affect the investigation at the accident site where evidence is sometimes transient. Early identification of problem areas may also result in urgent safety recommendations which may be necessary to prevent a similar occurrence. Refer to the Bureau's FDR and CVR Policy Manuals.

J. Should the recorders sustain damage in such a way that they cannot readily be read out at the chosen facility, or are of a type that requires additional expertise or equipment (such as Russian-built flight recorders), the Bureau will seek expert assistance consistent with the provisions of ICAO Annex 13. In some cases, the recorder may need to be taken to its manufacturer for read-out. In such cases, the work will normally be supervised by our Safety Investigator, or an Safety Investigator from another State to ensure that there is no real or perceived conflict of interest.

K. The Bureau will also consider electronic equipment other than flight recorders, which may contain valuable information related to the accident. Such as quick access recorder (QAR), full authority digital engine control (FADEC), health and usage monitoring system (HUMS), satellite navigation units (e.g. global positioning system (GPS), Global Navigation Satellite System (GLONASS), ground proximity warning system (GPWS), terrain awareness and warning system (TAWS), flight management system (FMS), ATC Radar, etc). Analyses of these units can significantly help the investigation, especially in the absence of information from the flight recorders. In addition, the Bureau may consider seeking expert assistance from the relevant States of Manufacture.

L. The Bureau will complete, publish and publicly release a Final Report of the investigation in accordance with ICAO Annex 13 requirements, consistent with the complexity and safety issues involved in the occurrence. When safety deficiencies are identified during the course of an investigation, the Bureau will encourage relevant organizations (airlines, airports, manufacturers, regulators, ICAO, when ICAO documents are involved, etc.) to take immediate safety action to prevent recurrence. If necessary, the Bureau will issue safety recommendations to the organization(s) in a position to take safety action. Chapter 10 of this manual contains further details about the report writing and safety recommendations.

6.2 RIGHTS, AUTHORITY AND OBLIGATIONS OF SAFETY INVESTIGATORS

The AIB Safety Investigators have the following rights and authority, which are consistent with Nigeria's obligations under ICAO Annex 13:

a) Unhampered access and control over an aircraft accident site and any wreckage thereon.

b) Unhampered access and control over all relevant accident/incident investigation materials, evidence, documents, etc., including air traffic service (ATS) recordings and recorders.

c) The right to conduct detailed examination and testing of relevant material/evidence without delay or interference.

d) The right and obligation not to disclose certain records for purposes other than accident and incident investigation, unless the appropriate authority for the administration of justice determines that their disclosure outweighs the adverse domestic and international impact such action may have on that or any future investigation. Such records include:

1) all statements taken from persons by the Safety Investigators during the course of the investigation;

2) all communications between persons having been involved in the operation of the aircraft; medical or private information of persons involved in the accident or incident;

3) cockpit voice recordings and transcripts from such recordings;

4) recordings and transcriptions of recordings of air traffic control units;

5) cockpit airborne image recordings and any part or transcripts from such recordings;

6) opinions expressed in the analysis of information, including flight recorder information; and any record not relevant for analysis of the accident or incident.

6.3 INVESTIGATION OPERATIONS

The AIB personnel and the Safety Investigators have the following rights, authority, and obligations:

a) Call on the services of local police or other authorized persons to ensure protection of the aircraft accident site, including the aircraft and its contents, until such time as the Bureau and the appointed Safety Investigators are able to directly take over custody and security of the aircraft and its contents.

b) Ensure that the aircraft, its contents, and other relevant evidence remain undisturbed, to the extent possible, until arrival and inspection by an accredited representative, if requested to do so.

Note.— Nothing in this provision precludes the Bureau *from instituting an investigation, and if for unforeseen reasons, the aircraft, etc. must be moved or otherwise disturbed pending the arrival of an accredited representative, the activities involved should be documented by photographs and other appropriate means.*

c) Ensure, in the event of an occurrence to be investigated, that all Air Traffic Services (ATS) communications recordings, radar data, and documents associated with the flight are secured for safekeeping.

d) Permit accredited representatives of the following States to participate in any investigation:

1) The State of Registry;

2) The State of the Operator;

3) The State of Design;

4) The State of Manufacture; and

5) Any other State that on request provides information, facilities or experts.

e) Permit advisers assisting accredited representatives to participate in an investigation to the extent necessary in order to make the participation by the accredited representatives effective.

f) Permit participation of experts (within the provisions of ICAO Annex 13, paragraph 5.27) from States having suffered fatalities or serious injuries to their citizens. Such experts should be permitted to:

1) Visit the scene of the accident;

2) Have access to the relevant factual information, which is approved for public release by the State conducting the investigation, and information on the progress of the investigation; and

3) Receive a copy of the Final Report.

Note.— Experts appointed under the provisions of ICAO Annex 13, paragraph 5.27, are not necessarily permitted to participate in the actual investigation; rather, they are provided limited access (cited above) related to the circumstances pertaining to the death or injury of citizens from their State(s). Likewise, experts should be permitted to assist in the identification of victims and in meetings with survivors from their respective States.

g) Entitle accredited representatives under the control of the IIC to participate in all aspects of the investigation, in particular to:

1) Visit the scene of the accident;

2) Examine the wreckage;

3) Obtain witness information and suggest areas of questioning;

4) Have full access to all relevant evidence as soon as possible;

5) Receive copies of all pertinent documents;

6) Participate in read-outs of recorded media;

7) Participate in off-scene investigative activities, such as component examinations, technical briefings, tests and simulations;

8) Participate in investigation progress meetings including deliberations related to analysis, findings, causes and safety recommendations; and

9) Make submissions in respect of the various elements of the investigation.

10) Advisers assisting the Accrep shall be permitted under the Accrep's supervision, to participate in the investigation to the extent necessary to enable the Accrep to make their participation effective.

h) Invite participation of the operator in the investigation, when neither the State of Registry nor State of the Operator appoints an accredited representative.

i) Invite participation of the manufacturer(s) (type design and/or final assembly of the aircraft) in the investigation, when neither the State of Design nor the State of Manufacturer appoints an accredited Representative.

j) Call on the best technical expertise available from any source to supplement its investigative staff, should the need arise.

k) Protect evidence and maintain custody of the aircraft and its contents for a period of time necessary to conduct the investigation, including protection from further damage, access by unauthorized persons, pilfering or deterioration. See Appendix F for detailed procedures.

l) Photograph and document evidence of a transitory nature by appropriate means to preclude loss of evidence.

m) Test and examine aircraft components, which could possibly cause damage to the components during these tests and examinations.

n) Coordinate between the Bureau and judicial authorities to ensure that the sole purpose of the investigation is for accident prevention purposes, and to ensure that any judicial or administrative proceedings to apportion blame or liability are separate from the ICAO Annex 13 investigation.

o) Ensure that autopsy examinations, as well as toxicological tests, are carried out for crew members and passengers for medical investigation purposes. Medical examinations also should be carried out on surviving flight crew, passengers and aviation personnel involved in the occurrence, such as air traffic controllers, if deemed necessary by the IIC.

p) For investigations being conducted by other States, provide the State conducting the investigation with:

1. (in all cases) all relevant information requested by that State; and

2. (in all cases) information about an aircraft that prior to the occurrence of an accident or incident has used or normally would use the facilities or services of Nigeria. For example, flight crew and aircraft maintenance

records, ATS recordings, meteorological information, etc., related to the occurrence should be provided to the State conducting the investigation.

q) Appoint an accredited representative from the Bureau in the case of an accident involving an aircraft of a maximum mass of over 2 250 kg, when specifically requested to do so by the State conducting the investigation.

Note.— Such an appointment does not necessarily require that the AIB accredited representative travel to the accident site; however, the accredited representative is required to fulfill the obligations contained in ICAO Annex 13 by providing whatever assistance is required.

r) Prevent disclosure of information by the accredited representative appointed by the Bureau and by Nigerian advisers on the progress and findings of an investigation, without the express consent of the State conducting the investigation.

Note 1.— Because the responsibility for release of information on the progress and findings of the investigation rests with the State conducting the investigation, the Bureau will ensure that its staff and any advisers from Nigeria abide by this requirement.

Note 2.— Nothing in this requirement precludes, or should delay, the release of information for the purpose of accident prevention (issuance of safety recommendations); however, such release should be coordinated with the State conducting the investigation.

s) For accidents involving death or serious injury to Nigerian citizens that occur in other States, Nigeria will appoint an expert, possibly from the Bureau, in accordance with the provisions of ICAO Annex 13, paragraph 5.27, to:

1) visit the scene of the accident;

2) have access to the relevant factual information, which is approved for public release by the State conducting the investigation, and information on the progress of the investigation; and

3) receive a copy of the Final Report.

t) Reopen an investigation if new and significant evidence becomes available, or if significant errors were made in the original analyses that would compromise the findings.

u) Make public the facts, conditions, and circumstances during the course of an investigation with the view toward informing the travelling public and preventing future occurrences.

v) Identify safety deficiencies during the course of investigations and in the Final Report of the investigation with the view toward promoting safety actions by addressing the recommendations to appropriate authorities, agencies, and organizations charged with aviation safety.

7.0 ACTIONS AT THE ACCIDENT SITE

7.1 GENERAL

7.1.1 Liaison with other authorities

The Accident investigation Bureau has agreements (MoUs) with other agencies and authorities in Nigeria to prepare for the eventuality of an aircraft accident (s*ee* Appendix C). Detailed information concerning the role and responsibility of each agency, for each type of emergency, is contained in the ICAO *Airport Services Manual* (Doc 9137), Part 7 *Airport Emergency Planning*. Although that manual deals primarily with accidents at or near an airport, the role and responsibility of each agency outlined therein may also apply to accidents elsewhere.

Victim identification is the responsibility of the coroner and medical officials, the Nigerian Police and the victim identification team. Medical personnel, such as pathologists and forensic dentists, should be aware of what is expected of them in the event of an aircraft accident, including autopsies and toxicology examinations. The Bureau has coordinated its needs in advance with the medical specialists in order to facilitate these arrangements.

Notification of next of kin is a sensitive task that must be planned and undertaken with great care in order to avoid anomalies, such as multiple or erroneous notifications. In Nigeria, the notification of next of kin is a *police, airline or medical examiner* task. ICAO Circular 285 *Guidance on Assistance to Aircraft Accident Victims and their Families* provides further guidance in this regard.

Although it is recognized that the circumstances surrounding each accident are different, the importance of proper planning and establishing good liaison with other authorities, particularly the police, the fire department, and the search and rescue services, cannot be overemphasized.

The Bureau will rely on assistance from other civil and military organizations to provide facilities, equipment and additional personnel, i.e. helicopters, heavy lifting and moving gear, metal detectors, communication equipment, and divers. It is important that heavy salvage equipment, such as cranes, bulldozers, or lifting helicopters, are readily available. In some cases, a full-scale expedition may have to be organized, requiring additional transportation, food, lodging, etc.

7.1.2 Initial actions at the accident site

The local fire department and the police will probably be the first authorities to arrive at an aircraft accident site. It is therefore important to enlist the cooperation of these authorities in order to ensure security and control of accident sites and cooperation during investigations. It is essential that vital evidence is not lost through interference with the aircraft wreckage in the early phases of an investigation. The fire department and the police should be aware of what is expected of them in the event of an aircraft accident. The Bureau is responsible for coordinating its needs in advance with relevant search and rescue organizations. Plans and arrangements for the following essential tasks are in place so that they can be accomplished without delay:

a) notification to the rescue coordination center (ICAO Annex 12 - *Search and Rescue* refers);

b) notification to the Bureau and other authorities, as necessary;

c) securing the aircraft wreckage from fire hazards and further damage;

d) checking for the presence of dangerous goods, such as radioactive consignments or poisons being carried as freight, and taking appropriate protective action;

e) placing guards to ensure that the aircraft wreckage is not tampered with or disturbed;

f) taking steps to preserve, through photography or other appropriate means, any evidence of a transitory nature, such as ice, snow or soot deposits; and

g) obtaining the names and addresses of all witnesses whose testimony may assist in the investigation of the accident.

Apart from these arrangements, the wreckage should be left undisturbed, to the extent possible, until the arrival of the investigation team. It has been emphasized to the police and the rescue services that the bodies of persons killed in an accident involving a large aircraft should, where practicable, be left *in situ* for examination and recording by the police victim identification team. There may also be times when, for crashworthiness/survival investigation purposes, it may be appropriate for the deceased to be left *in situ* until viewed and documented by the Bureau's

investigation team. Similarly, personal belongings should remain untouched as their location may assist in the identification of the victims. In general, disturbance of the wreckage should be limited to that necessary to rescue survivors, extinguish fires and protect the public.

7.2 RESCUE OPERATIONS

The primary concern of the first persons to arrive at the site of an aircraft accident is to rescue and aid survivors and protect property within the means available. Persons who are involved with the extrication of victims from aircraft wreckage should, at the earliest opportunity, record their observations regarding the location in the aircraft where the survivors were found and what portions of the wreckage had to be moved during the rescue.

If circumstances permit, the bodies of persons killed in the accident should be left as found until their location and condition are recorded, photographs are taken and a chart is made indicating their location in the wreckage. If bodies are located outside the wreckage, their location should be marked by a stake with an identifying number. A corresponding label should be attached to each body stating where it was found. The careful recording of these data is essential to the identification of bodies and also provides information which may assist in the accident investigation.

In the event that bodies have been removed from the aircraft wreckage before the arrival of the aircraft accident Safety Investigators, it is important to establish whether or not a record, as set out above, has been maintained. If not, the rescue personnel should be interviewed in order to establish such a record.

The Bureau's Safety Investigators should determine if there has been any disturbance of the wreckage during the rescue operations and should record any such disturbance.

Upon completion of the initial rescue operation, rescue personnel should exercise as much care as possible to ensure that their movements do not destroy evidence which may be of value to the investigation. For example, once the survivors have been rescued and the fire risk has been eliminated as far as practicable, movement of ambulances and fire vehicles should not be permitted along the wreckage trail.

7.3 PROTECTION OF EVIDENCE, CUSTODY AND REMOVAL OF WRECKAGE

7.3.1 Security at the accident site

When notified of an accident, the IIC or the designated accident site safety and security coordinator should immediately verify that arrangements have been made to ensure the security of the wreckage. This is usually arranged through the police, but in some cases, military personnel or specially recruited civilians may be employed.

Before investigation work commences at the accident site, the cargo manifest must be checked to ensure there are no hazardous materials in the consigned cargo.

When it is suspected that the aircraft may have carried dangerous cargo such as radioactive consignments, explosives, ammunition, corrosive liquids, liquid or solid poisons or bacterial cultures, special precautions should be taken to station the guards at a safe distance from the wreckage. This is particularly important if a fire has occurred because it tends to disperse the contaminants. Signs indicating a potentially dangerous area should be posted until experts, in consultation with the designated AIB's site safety and security coordinator have thoroughly evaluated the danger involved.

Upon arrival at the accident site, one of the first tasks of the Safety Investigators is to review the security arrangements. The guards should be thoroughly conversant with their duties, which are to:

a) protect the public from the hazards in the wreckage;

b) prevent disturbance of the wreckage (including bodies and contents of the aircraft);

c) protect property; and

d) admit to the accident site only persons authorized by the Bureau; and

e) protect and preserve, where possible, any ground marks made by the aircraft.

Clear and specific instructions should be given by the Bureau's IIC or accident site safety and security coordinator to those guarding the wreckage site of the need for authorized persons to have proper identification. In the case of major investigations,

this should be accomplished through the issuance of photographic identification badges or some form of security pass to all authorized persons. The use of armbands or jackets that show affiliation and duty may be acceptable.

If the wreckage has not been scattered, effective security can be achieved by roping off the area. However, if there is a long wreckage trail, the task of securing the site may be formidable and many guards should be required in a wide perimeter.

The police can be of considerable assistance in liaising with the local population, particularly with regard to locating outlying pieces of wreckage. While persons living in the neighbourhood should be encouraged to report the discovery of pieces of aircraft wreckage, the importance of leaving these pieces undisturbed should also be impressed upon them. Collecting outlying pieces of aircraft wreckage and arranging them into neat piles alongside the main wreckage are sometimes done with good, but misguided, intentions. With no record of where such pieces were found, their value to the investigation is diminished. Similarly, the removal of pieces of aircraft wreckage by souvenir hunters must be prevented.

The aircraft wreckage should be guarded until the IIC is satisfied that all evidence at the site has been gathered. The IIC should review the situation periodically and arrange for the progressive release of guards as appropriate.

Note. With regard to paragraphs 4.4 and 4.5 of this manual, consideration should be made at all times by the IIC for the protection of Safety Investigators at the accident site (reference to ICAO Circular 315 Hazards at Aircraft Accident Sites*)*

7.3.2 Removal of wreckage and personal effects

Notwithstanding the requirement to preserve evidence, the Commissioner or IIC may permit the removal of or interference with the wreckage as may be necessary for the following purposes:

a) extricating persons or animals;

b) removing any mail, valuables or dangerous goods carried by the aircraft for the purpose of preservation;

c) preventing destruction by fire or other cause;

d) preventing any danger or obstruction to the public, air navigation or other transport; or

e) if the wreckage is in water, the aircraft or its contents may be removed to such extent as may be necessary for bringing the wreckage or its contents to a place of safety

Note.- goods or passenger baggage or any other property removed from the wreckage shall be under the custody of police officer in-charge at the site.

7.4 WRECKAGE IN THE WATER

7.4.1 Initial actions

As soon as it has been determined that the wreckage is in water, efforts must be made to obtain the best technical expertise available. The Bureau will call upon the services of the Nigerian Navy and other organizations and resources with specialized expertise from outside of the country to ensure that the aircraft wreckage under water is found and recovered as necessary in a timely manner. As part of its contingency planning for an accident in the water, the Accident investigation Bureau has pre-arranged agreements (MoUs) with relevant organizations and States to obtain the necessary specialized assistance. (refer to appendix C.)

Note.— Experience has shown that the search for and the recovery of the aircraft wreckage under water is a specialized task requiring experienced personnel and specialized equipment. Specialized agencies should be consulted early to avoid unnecessary delays in locating and recovering the flight recorders and the aircraft wreckage from under water.

If the water is shallow (less than 60 m (196 ft)), divers can be effective for search and recovery of the wreckage; however, mapping of the wreckage using side-scanning sonar may need to be used to ensure the safety of the divers. If the wreckage is located in deep water, or conditions make it difficult to use divers, use of the following equipment may be considered:

1) underwater equipment used to locate the underwater locating beacons (ULB) on the flight recorders; underwater videos and cameras;

2) side-scan sonar equipment; and

3) manned or unmanned submersibles (remotely operated vehicles (ROVs).

7.4.2 Decision to recover the aircraft wreckage

The circumstances and location of an accident should determine whether salvage of the aircraft wreckage is practicable and necessary. In most cases, the aircraft wreckage should be recovered, if it is considered that the evidence it might provide would justify the expense and effort of a salvage operation. If the aircraft wreckage is likely to contain evidence significant to air safety, the Bureau will provide the impetus needed to ensure that action is promptly taken to recover the aircraft wreckage. Such action includes obtaining the necessary funding and specialized equipment and personnel for the tasks.

Note.— The Bureau has established contingency plans with the government to obtain immediate supplemental funding to begin a search and recovery operation for wreckage under water.

There have been several instances where aircraft wreckage has been successfully recovered from deep water. Such recoveries necessitated expensive salvage operations lasting several months, but the results exceeded expectations, and the evidence obtained from the aircraft wreckage established the causes and contributing factors of the accidents and led to accident prevention measures.

7.4.3 Aircraft wreckage distribution

Once the aircraft wreckage has been located, a chart plotting the wreckage distribution should be prepared. In shallow waters, divers can achieve this. In deep waters, side-scan sonar and underwater video cameras from remotely operated submersibles may be used. The state of the various pieces of aircraft wreckage, their connection by cables or tubes, the cutting of these connections for the salvage operations, etc., should be recorded before lifting the various pieces of aircraft wreckage from the bottom. Usually, the divers are not experienced in aircraft accident investigation and, therefore, detailed briefings will be necessary.

7.4.4 Preservation of the aircraft wreckage

The rates at which various metals react with salt water vary considerably. Magnesium components react quite violently and, unless recovered within the first few days, may be completely dissolved. Aluminum and most other metals are less affected by immersion in salt water. However, corrosion will rapidly accelerate once the component is removed from the water, unless steps are taken to prevent this from occurring.

Once the aircraft wreckage has been recovered, the components should be thoroughly rinsed with fresh water. It may be convenient to hose the aircraft wreckage as it is raised out of the sea prior to it being lowered onto the salvage vessel. Freshwater rinsing does not stop all corrosive action. When large aircraft are involved, it may not be practicable to take further anti-corrosion action on large structural parts. However, all components that require metallurgical examination will require further preservation. The application of a water-displacing fluid should provide additional corrosion protection; fracture surfaces should then be given a coat of corrosion preventive substances such as oil or inhibited lanolin.

When organic deposits, such as soot deposits or stains, require analysis, organic protective substances should not be used. Freshwater rinsing should be employed followed by air drying. When the component is completely dry, it should be sealed in a plastic bag with an inert desiccant such as silica gel.

7.5 PROCEDURES FOR HANDLING FLIGHT RECORDERS

Flight recorders must be handled in accordance with the Bureau's flight recorder policy documents.

> CAUTION: UNDER NO CONDITIONS SHOULD AN ATTEMPT BE MADE TO REMOVE OR TO PLAY AN FDR OR CVR IN THE FIELD. THE DATA COULD BE ERASED OR DAMAGED.

Protect the recorder from strong magnetic fields. It is important to remember that an X- ray transmitter at an airport security station may damage the data. If a recorder, tape or solid-state memory unit is mailed, please mark the package

"SENSITIVE FLIGHT RECORDING WITH CRITICAL DATA. DO NOT EXPOSE TO X-RAY RADIATION OR MAGNETIC FIELDS".

Do not open the recorder and do not allow anyone to remove the tapes or solid-state memory unit under any circumstances. If the recorder is dry and undamaged, use a shipping container obtained from the operator involved in the accident or incident, if possible. Otherwise, package it carefully for shipment, unless it is to be hand-carried; it is not necessary to package an undamaged recorder for hand-carriage.

If the case is broken, do not remove the tape or solid-state memory unit from the device. Wrap the entire recorder and its contents in polyethylene or similar material or heavy paper before packaging for shipment.

If the tape reels or solid-state memory boards are separated from the unit, wrap them in polyethylene or paper before applying sealing tape. Never apply sealing tape directly to the recording medium. Do not remove the recording medium from the reels or enclosure.

If the recording is a tape and it is found separated from the recorder, try not to wrinkle or crease it. Carefully wrap it on a spool or cardboard tube or something similar. Wrap this in polyethylene or paper and pack it carefully. Enclose all fragments of tape, no matter how small. Never pack the tape randomly into a box or container. Data are easily degraded; creases and wrinkles can cause electronic noise and permanent data loss.

If the flight recorders are found in water, they should not be dried, but should be kept immersed in fresh or distilled water until the assigned flight recorder specialist assumes responsibility for them.

The Bureau never permits flight recorders that have been submerged in water to dry out before reaching the recorder laboratory in order to prevent damage to the recording media. Ship them to the laboratory whilst immersed in the fresh or distilled water in watertight containers.

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8.0 ORGANIZATION AND MANAGEMENT OF THE INVESTIGATION

8.1 GENERAL

To achieve its purpose, an investigation must be properly planned and managed. The main parts of an investigation must be planned so that the members of an investigation team are aware of their various tasks and have the appropriate qualifications to perform them. The plan must also recognize that these tasks should be coordinated by the IIC, who is the leader of the team.

When a large aircraft is involved, a sizeable team of Safety Investigators, set up in specialized groups, is necessary to properly cover all aspects of the investigation. In some investigations, the areas on which the investigation should focus will become evident at an early stage, and the main investigation effort can then be effectively channeled into these relatively specialized areas. Nevertheless, it is still essential that Safety Investigators progress systematically through all aspects of the accident. Whether or not the causes of an accident are apparent, the investigation will determine any underlying systemic factors that may have contributed to the accident or its aftermath as well as any non-causal deficiencies that could contribute to future accidents or their aftermath.

In the case of accidents involving small aircraft, the investigation effort is proportionately smaller. The functions are still the same, but the work is undertaken by one or two Safety Investigators or, alternatively, by a Safety Investigator and a specialist qualified in a particular aspect that requires expert examination. Again, it is stressed that even when small aircraft are involved, pre-investigation planning and use of investigation checklists are essential.

8.2 THE INVESTIGATION MANAGEMENT SYSTEM

8.2.1 Smaller investigations of incident and accidents

The investigation of incidents and non-major accidents may be conducted by one Safety Investigator, sometimes assisted by one or few other safety investigators. In such situations, the IIC will have the responsibility for the organization, conduct and reporting of the investigation, and will also be active in the investigation work appropriate to his expertise and background. For example, if the IIC has a pilot

background, then another team member could have different technical expertise and background. Depending on the circumstances of the occurrence, other subject matter experts (such as air traffic controller, aircraft performance, recorders, and human factors) could be assigned to the investigation team. Figures 8-1, 8-2 and 8-3 contain sample organizational charts for smaller investigation teams.

Smaller investigations will vary from occurrence to occurrence. It could be a field investigation for which come of the safety investigators would deploy to the occurrence site, the location of the aircraft, the airline's office, and/or the air traffic facility; or it could be an office where all or most of the investigation is concluded from the Bureau's offices.

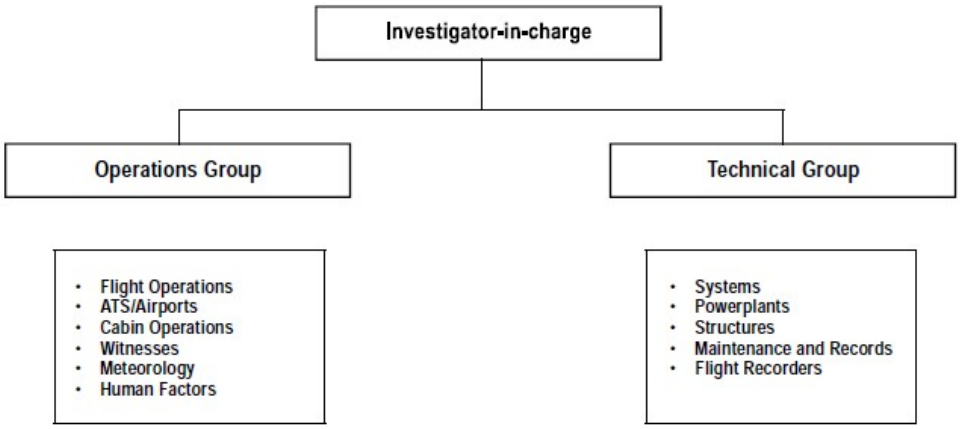

Figure 8-1 Sample organizational chart for smaller investigation

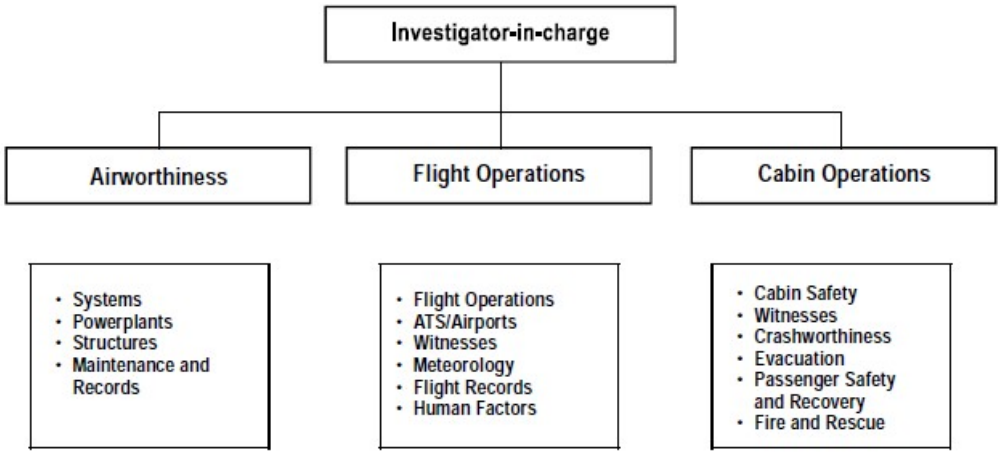

Figure 8-2 Sample organizational chart for smaller investigation

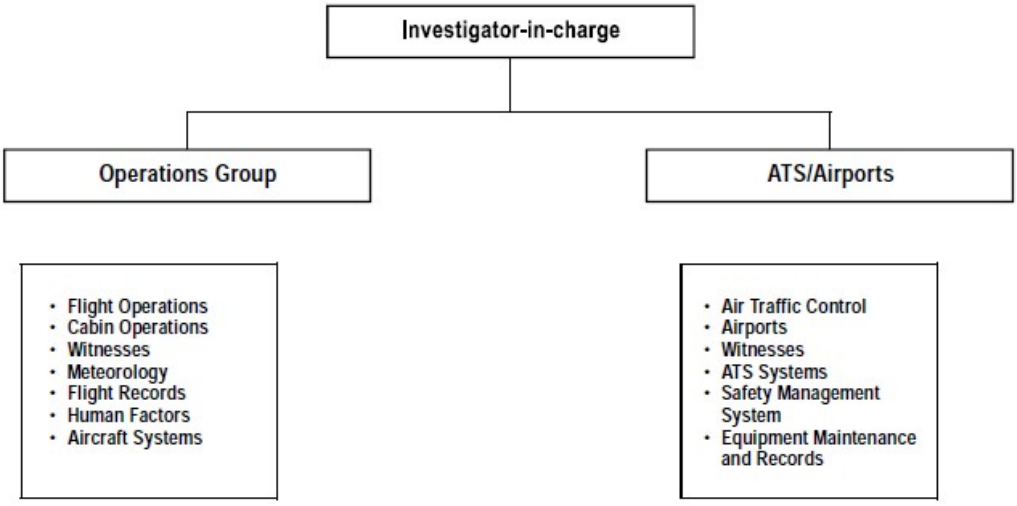

Figure 8-3 Sample organizational chart for smaller investigation

Where a non-major accident occurs on a airfield, there will likely be significant pressure to remove the wreckage so that normal operations can resume. In the same vein, for incidents that occur in flight or on the airport manoeuvring area, there might be significant pressure to move the aircraft and to return it to normal operations. In both these situations, the primary concern for the investigation should be the potential for loss of evidence. In this regard, the IIC may have to put a priority on properly documenting the wreckage site and/or the aircraft prior to its removal.

For incidents wherein there has been little or no damage, there will likely be sufficient pressure to return the aircraft to normal operations. Removing a recorder may delay the dispatch of an otherwise serviceable aircraft. In this regard, the investigator may have to put a priority on: first, ensuring that flight recordings are protected properly; second, determining if the recordings are required for the investigations; third, downloading the recordings; and forth, releasing the aircraft for operations.

For incidents and non-major accidents, it may be difficult to get on-site support from all entities having an interest in the investigation, such as foreign States, airlines and aircraft and component manufacturers. As a result, extra effort will have to be taken to ensure good communications between the authority's team and these other entities throughout the investigation.

8.2.1.1 Responding to notifications

Although immediate notification of accidents and incidents to the Bureau is essential, the uncertainty regarding the circumstances of incidents and non-major accidents, and perception that such occurrences may be low-risk events, frequently lead to delayed and incomplete notifications. Such time delays usually lead to the loss of perishable evidence. Upon receipt of notifications, the duty Officer should immediately contact the report source to ensure that all required information has been provided, to determine who and what organizations may have been involved in the occurrence, to determine who else has been informed of the occurrence, and to determine what actions have already been taken in response to the occurrence.

8.2.1.2 Securing Documentation

From the early stage in the investigation, it is important to secure the operational and maintenance documents of the occurrence aircraft, as well as all other documents relevant to the occurrence. What documents will be required for the investigation also depends on the nature of the occurrence. The IIC should decide as soon as possible, what documents need to be obtained and from which organizations (see Investigation Events Checklist – AIB.01.07 in Appendix M). He should by telephone, email or any suitable means, contact relevant organizations (airline, maintenance facility, NAMA, NCAA, FAAN, NiMET, etc) to secure the documents necessary for the investigation.

Flight recorder data should be recovered as a matter of course when the decision is made to investigate. Some operators have the equipment to copy the FDR and CVR recordings without removing the unit in-situ.

Consider the following before demanding a CVR or FDR be removed from an aircraft:

a) Is the recorder data vital or useful to the investigation?

b) Can the data be obtained from other sources?

c) Can a suitable copy of the data be made without recording being removed from the aircraft?

d) If a copy of the recordings cannot be made at the location of the aircraft, what is the length of time that the aircraft can operate before the desired data is overwritten?

Note.- removing CVRs for incidents: ICAO Annex 6 states that " Flight recordings shall not be switched off during flight time". In addition, the aircraft minimum equipment list (MEL) does not allow an aircraft to be flown with a "purposely" removed or disabled flight recorder. The Bureau might be taking an unacceptable risk if the CVR is pulled and the operator continues to fly without a replacement installed since, if the aircraft subsequently sustains another occurrence, there would be no CVR recording.

8.2.2 Major accident investigation

An accident investigation involving a large or complex aircraft should require a large team of Safety Investigators in order to conduct the investigation in the most effective and expeditious way. The effective utilization of the available Safety Investigators in a major investigation can be achieved by using an "investigation management system" (reference to ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Part II, Chapter 4), the Bureau's Engineering Guidance Material and Operations Guidance Material. The investigation management system divides the investigation activities into functional areas, each of which can be assigned to a group within the investigation team. Each investigation group should have as many members as are necessary to examine the particular circumstances of the accident.

After the initial visit and walk-through of the accident site, the first management action to be taken by the IIC is to convene an "organizational meeting". At the organizational meeting, the IIC should identify all participants who should be assigned to the team and he/she should excuse others, such as news media, lawyers, insurers, who should not be permitted to be part of the team.

The primary purpose of the organizational meeting is to describe the rules, policies and procedures of the investigation and to organize the team into the specific groups responsible for various aspects of the investigation.

Note 1.— Attention must be paid to the need to facilitate entry of accredited representatives and advisers from other States involved in the investigation. To this end, the State of Occurrence of the accident must not require any other travel document than a passport of qualified personnel designated or appointed by other States to participate in the investigation. In this connection, reference is to be made to ICAO Annex 9 Facilitation*, Chapter 8, Section B.*

Note 2.— Organizational meetings should be convened by the IIC for both large and small investigations as part of the investigation management system.

Note 3.— If properly planned and organized, the organizational meeting should take less than one hour so that the investigation groups can then begin their important work.

At the organizational meeting, the IIC should discuss the rights, obligations, and responsibilities of the Safety Investigators. The IIC should also discuss the policies and procedures contained in this manual and should make available a copy of this manual for review by all participants to ensure they understand their roles, tasks and duties. Then the IIC should organize the Safety Investigators into groups led by senior Safety Investigators.

An attendance sheet should be circulated for all participants to sign. Signing the attendance roster confirms that the person signing has read, understood, and will comply with the legislation, regulations, policies and procedures during the course of the investigation. Administrative personnel should be assigned to ensure all participants sign the attendance roster for each team meeting.

Note.— Use of interpreters is important during team meetings, even though all participants appear to fully understand English during the meetings. Those persons, for whom English is not their first language, may have difficulty with complex issues.

Depending on the magnitude and circumstances of the accident, several groups may be formed for various technical investigation areas (see Figures 8-4, 8-5 and 8-6).

The investigation group chairpersons are senior Safety Investigators, each responsible for a specific group. The members of the investigation groups should include specialists from the Bureau, the airline, the NCAA, the aircraft and engine manufacturers, the airport, and employee unions, as appropriate. The groups also may include advisers assigned by the accredited representatives from other States.

All members of the group should normally have access to all information uncovered in the course of the investigation and are required to participate in the investigation until the group report is completed.

The investigation groups that might be formed during a major investigation might include: Witnesses, Meteorology/Weather, Air Traffic Services, Aircraft Structures, Aircraft Systems, Powerplants, Maintenance Records, Survival Factors, Human Performance, Aircraft Performance, and Flight Recorders. Other special groups may be formed as the need arises, such as Fire and Explosion, Underwater Recovery, Mock-up, etc. The circumstances and complexity of the accident should determine the number and types of groups required (see Figure 8-7).

Note 1.— The ICAO Manual of Aircraft Accident and Incident Investigation *(Doc 9756), Part II, Chapter 3*

Investigation Responsibilities*, provides an overview of the typical responsibilities of investigation team members of a major investigation. In addition, Chapter 4* Major Accident Investigations*, includes information on the Major Accident Investigation Guide (MAIG), which provides the IIC, group chairpersons and other investigation team members with basic major investigation guidelines.*

Note 2.— The ICAO Manual of Aircraft Accident and Incident Investigation *(Doc 9756), Part III, and Bureau's Engineering and Operations Guidance Materials contain detailed guidance on how to conduct specific areas of investigation.*

Note 3.— Each of the group chairpersons should provide a copy of the relevant guidance materials to his/her group members to review before beginning the investigation.

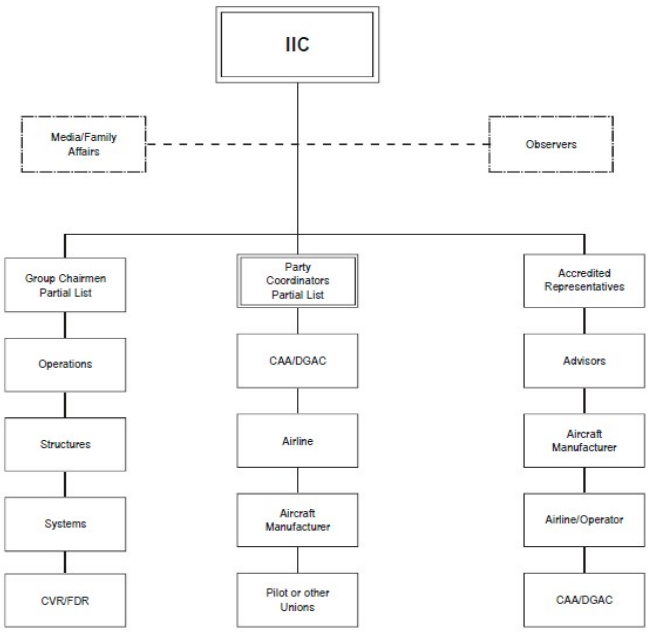

Figure 8-4 Example of how the investigation team may be organized, depending on the nature of the investigation

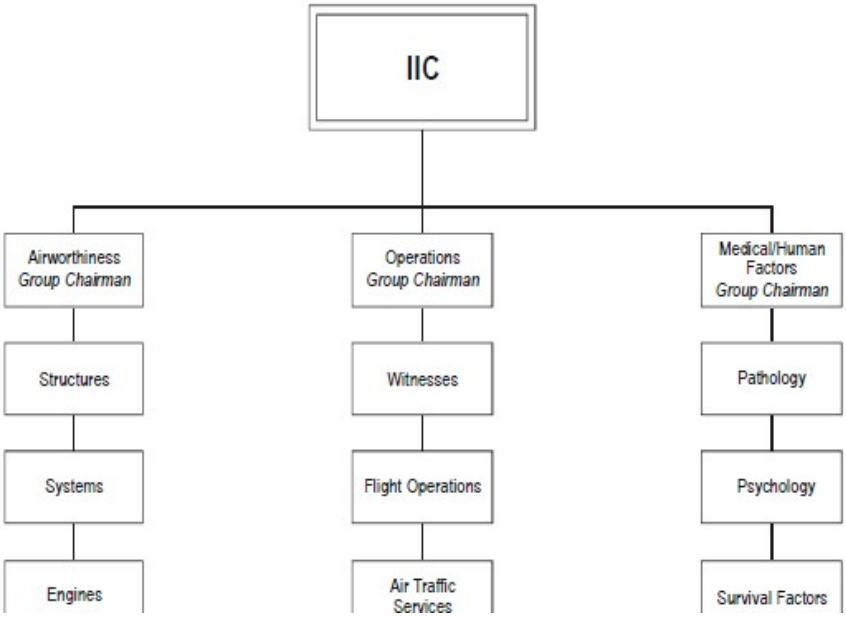

Figure 8-5 Investigation team – Example A

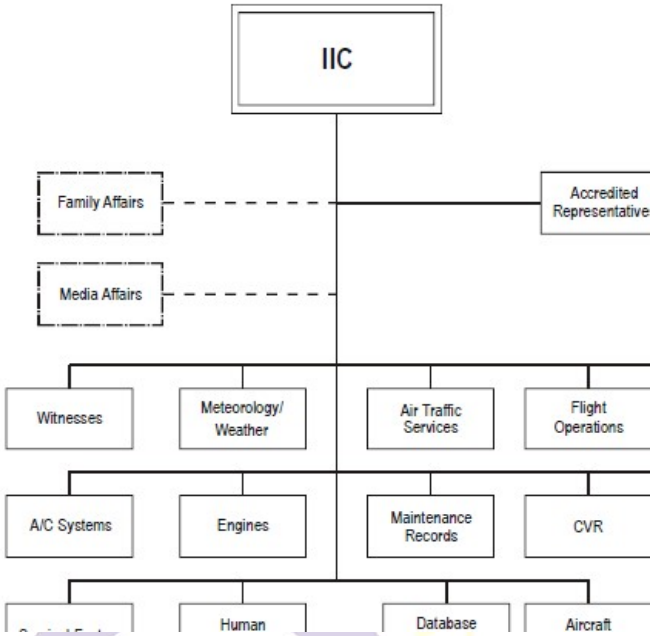

Figure 8-6 Investigation team — Example B

In all investigations, a coordinator (spokesperson/team leader) from each of the organizations involved (airline, regulator, manufacturer, etc.) is appointed for liaison duties with the IIC, and to oversee the work of the specialists from their organization. The IIC is the person responsible for communications with the accredited representatives (and their advisers) from other States participating in the investigation in accordance with ICAO Annex 13.

Accident investigation management can be greatly facilitated if the IIC uses a flow chart with a number of events. Each event has a corresponding descriptive phrase. The flow chart allows the Safety Investigators to ensure that the essential sequence of events is followed. The ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), *Part II,* contains an "Event Checklist" specifically intended to aid accident investigation management by documenting the various stages of the investigation. This checklist should be used as a tool to manage the various investigation steps to be taken to complete the investigation. It is a tool only and must be supplemented by other materials.

Each event checklist should be used in conjunction with Engineering Guidance Materials, Operations Guidance Materials, the Major Accident Investigation Guide contained in the ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc

9756), Part II; and the specific investigation task materials (checklists) contained in Doc 9756, Part III, and tailored to the particular accident circumstances. Since the investigation tasks may differ due to the circumstances of the accident, the checklists should be reviewed to ensure that the tasks are appropriate to the organization and conduct of the accident investigation. Arranging the activities and tasks into checklists allows the IIC to clearly indicate what has been accomplished and what is to be accomplished by the Safety Investigators and the various groups during the investigation. It also makes it easier for the IIC to provide direction and guidance to those persons who are participating in an investigation for the first time and who may require specific advice. The checklists, aside from being part of the investigation management system, establish some order in what is often a confusing situation.

The group chairpersons are responsible for completing the investigation tasks using their relevant checklists in order to fulfill their various tasks. Therefore, the group chairpersons must be knowledgeable about the investigation management system and the tasks their groups are required to carry out. They should be well aware that the outlined tasks are not necessarily exhaustive and that particular circumstances may warrant revision of tasks. When using the checklists, it is desirable that the Safety Investigators take note of the completion date of each task, any further action required or anything of significance associated with a particular task. Regardless of how much planning goes into the preparation of the checklists, there will inevitably be cases in which the outlined tasks will have to be adapted to the particular circumstances of the investigation.

The checklists help the group chairpersons organize the work of their groups, and provide the IIC with a tool to monitor progress. At the daily progress meetings, the Safety Investigators should report which tasks on their checklists have been completed since their last report, and the IIC should record that progress on the flow chart. The advantage of this system is the ease with which the progress of the investigation can be reported to headquarters from the accident site and the fact that the flow chart at headquarters can be updated to reflect the current status of the investigation.

The investigation management system is one of the fundamental tools to be used in a major investigation, and a Safety Investigator who is likely to be appointed IIC or group chairperson of a major investigation should be familiar with this system prior to attempting to use it in the field. The effectiveness of the system is directly related to how well each Safety Investigator adheres to the flow chart and the checklists.

It is the policy of the Bureau to use the investigation management system during the conduct of its investigations.

8.3 PROGRESS MEETINGS

The investigation management system incorporates the use of a daily progress meeting of the investigation team. The primary purpose of progress meetings is for all team members to participate in the daily reports of the various groups and for all team members to be aware of findings of other groups and to plan future activities. It also builds the "team concept", which is essential for a major accident investigation to be successful. Further, the progress meetings provide the IIC the opportunity to oversee the progress and findings of the investigation and to provide leadership and guidance as necessary.

Note.— Progress meetings should be held whether the number of investigation team members is small (3 to 5 persons) and may be held in an informal setting, such as in a vehicle at the accident site, or similar location. Large progress meetings (10 to 100 persons) should be held in a more formal setting, such as a large room at a hotel or similar location. Holding such meetings is part of the investigation management system.

The typical format of the progress meeting would be for the IIC to make a general opening statement and to bring the team up to date on developments outside of the team, such as review of maintenance records, reports from flight recorder read-outs, and other investigation activities being conducted away from the accident site. If new Safety Investigators join the team, they will be given the rules, policies, and procedures and assigned to the appropriate group.

Then the IIC should request that each group chairperson give a brief report. The format of group chairperson reports should be:

a) What we did today.

b) What we found today.

c) What we plan to do tomorrow.

d) Any questions, comments, or suggestions.

Group reports should be short and concise. Relevant documents, such as weather reports or similar data, should be distributed to other participants and do not have to be read at the progress meeting. Reports and questions should be restricted to factual information. This is not the place to begin to speculate or analyse the causes of the accident. If the progress meeting is organized and managed properly, it should not take more than one hour.

Note.— When participants have different first languages, the use of interpreters is essential for all persons to gain the full benefit of the progress meeting reports, so they can understand the information to pass on to their superiors and to develop accident prevention measures. In some cases, it would be appropriate for the group chairpersons to provide advance hard copies of their briefing notes for participants to follow during those oral briefings.

Following the progress meeting, the IIC should report findings and progress to his/her superiors and should prepare for possible media and family briefings.

8.4 COOPERATION WITH THE MEDIA

All major aircraft accidents and most small accidents generate a high degree of interest from the public and the media. A good rapport with the media is usually an asset to the investigation. It may be necessary to enlist the cooperation of the local media to withhold precise details of the location of an aircraft accident until adequate crowd-control measures can be implemented. It may also be necessary to enlist the aid of the media in obtaining further information about the local area, the names of possible witnesses or when seeking the public's assistance in recovering missing pieces of the aircraft wreckage.

To promote dissemination of factual information and to minimize speculation and rumours about the accident, the Bureau will provide the media, on a regular basis, with details of the progress of the investigation and facts that can be released without prejudice to the investigation. For this reason, the IIC and the Bureau will establish a single point of contact for media inquiries. This contact is usually the Commissioner/CEO or a person designated by the Commissioner/CEO. The Bureau, in consultation with the accredited representatives, should provide non-prejudicial

facts and circumstances to the media. Nevertheless, it is necessary to ensure that the needs of the media do not interfere with the proper conduct of the investigation. The media should be informed that a preliminary (factual) report will be released about 30 days after the accident.

Other agencies and organizations involved or affected by the accident (such as airlines, airport authorities, emergency services, and aircraft manufacturers) may also need to release information to the media about their involvement, and such efforts should be coordinated, to the extent possible, among the agencies and organizations involved. Nonetheless, the Bureau is the primary point of contact and the only organization permitted to release information on the progress and findings of the investigation.

For accident investigations outside the country and conducted by other States, the Bureau-appointed accredited representative and his/her advisers participating in the investigation shall not give the media or the public access to any information or documents obtained during the investigation without the express consent of the State conducting the investigation. The release of such information by the Bureau or other Nigerian officials, without the consent of the State conducting the investigation, would undermine the mutual confidence and cooperation among the States involved and must therefore be avoided.

8.5 DEALING WITH FAMILIES OF ACCIDENT VICTIMS

ICAO Circular 285 *Guidance on Assistance to Aircraft Accident Victims and their Families* contains internationally accepted guidance and practices for States to follow when dealing with aircraft accident victims and their families.

Victims and their families are not permitted to participate in the investigation; however, ICAO Annex 13, paragraph 5.27, “Participation of States having suffered fatalities or serious injuries to its citizens”, provides certain rights and entitlements to States, which have a special interest in an accident by virtue of fatalities or serious injuries to its citizens. Specifically, such States, upon making a request to do so, are permitted to appoint an “expert”, who shall be entitled to:

a) visit the scene of an accident;

b) have access to the relevant factual information, which is approved for public release by the State conducting the investigation, and information on the progress of the investigation; and

c) receive a copy of the Final Report.

This should not preclude the State from also assisting in the identification of victims and in meeting with survivors from that State.

These provisions do not permit the appointed expert to actively participate in the investigation.

Note.— For accidents that occur outside country *that involve* Nigerian *citizens, it may be necessary for* Nigeria *to send experts to assist the other State with the identification of victims. This task is not directly related to accident investigation and does not fall under the mandate of the Bureau. Although the Bureau may not be required to provide an expert(s) for this task, the Bureau should encourage the relevant Nigeria's foreign affairs authorities and personnel to provide such assistance, normally through the Nigerian Embassy in the other State.*

ICAO Annex 9 *Facilitation*, Chapter 8, Section I *Assistance to aircraft accident victims and their families*, contains SARPs related to States' obligations to facilitate entry into their territory, on a temporary basis, of family members of victims of aircraft accidents. Nigeria will extend all necessary assistance, such as issuing emergency travel documents, arranging transport, and clearing customs for families of aircraft accident victims.

The general responsibilities for dealing with the families and aircraft accident victims lie with the airline, which should have in place a plan for dealing with families and victims of aircraft accidents. However, the Bureau will provide oversight of such activities. Therefore, the Bureau will establish liaison with relevant family members, or their representatives, to facilitate the provision of briefings on the investigation findings and the progress of the investigation, release of human remains, release of personal effects held as part of the investigation to the families and the accident so far as it is practicable, and to facilitate the necessary access for other States' experts, in accordance with the provisions of ICAO Annex 13, paragraph 5.27, and ICAO Circular 285. The Bureau will coordinate with relevant agencies such as police, judicial authorities, medics, NEMA, the Airline Operator and the airport authority facilitate these.

8.6 SECURING THE RECORDS, SAMPLES AND RECORDINGS

The Bureau's procedures require that, in the event of an accident, flight recorders, all recording kinds of devices found on board belonging to the crew or passengers, all air traffic services communication and data recordings and documents deemed to be associated with the flight, and aviation meteorology data, be secured and placed in protective custody. The Bureau has agreements (MoUs) with the relevant organizations (police, Nigerian Airspace Management Agency- NAMA and Nigerian Meteorological Management Agency _ NiMET) to fulfill this requirement (see Appendix C). Further instructions are in place, which require that the aircraft operator's documentation associated with the aircraft, the flight crew and the flight operation is placed in safekeeping.

8.7 REMOVAL OF THE AIRCRAFT WRECKAGE

Detailed information concerning planning, equipment and procedures for the removal of disabled aircraft at airports is contained in the *Airport Services Manual* (Doc 9137), Part 5 *Removal of Disabled Aircraft*.

8.8 RELEASE OF THE AIRCRAFT WRECKAGE

The aircraft wreckage should remain under the custody of the Bureau until such time as it should be released back to the owner of the aircraft, or the owner's representative (insurance company). In many cases, the aircraft wreckage should be released in increments, depending on the needs of the Safety Investigators for testing of selected components.

For accidents in Nigeria involving aircraft registered and operated by other States, the Bureau will facilitate the release from custody of the aircraft, its contents, or parts thereof, as soon as they are not required for the investigation, to person(s) duly designated by the State of Registry or State of the Operator. This provision is particularly important when occurrences involve minimal damage to an aircraft that needs to be repaired and returned to service.

Portions of the aircraft wreckage may be released, or the entire aircraft wreckage may be released, using the aircraft wreckage and parts release form (see Appendix F) that includes the name and organizational information of the IIC and the owner of the aircraft or the owner's authorized representative. The release form should include the identifying information on the accident and the aircraft.

If the entire aircraft wreckage is to be released, the IIC should sign the aircraft wreckage and parts release form and he/she should obtain a signature from the owner of the aircraft, or owner's representative, who accepts the aircraft wreckage. If only portions of the aircraft wreckage are being released, the aircraft wreckage and parts release form should list the components being released and any components being retained for further examination, along with the appropriate signatures verifying the release and retention of parts. Each time a portion of the aircraft wreckage is released, an additional aircraft wreckage and parts release form should be completed to document the transfer.

Note.— The Bureau will obtain full concurrence with all parties, including police involved in the investigation, about the decision to release aircraft wreckage before it is turned over to the owner of the aircraft or the owner's representative. The IIC or any assigned officer of the Bureau should coordinate his/her decision with the Commissioner/CEO or any officer designated by the Commissioner.

9.0 TESTS AND COMPONENT EXAMINATIONS

9.1 LABORATORY TESTING OF AIRCRAFT SYSTEMS AND COMPONENTS

Although the Bureau has established its material laboratory, In the meantime, the laboratory is not fully functional. The Bureau depends on facilities and expertise of other States' investigation authorities for testing and analysis of aircraft components. In many cases, specialist examinations or testing of specific components will be required. The same policies and procedures for tests and component examinations as used for the accident site phase of the investigation will be followed. The ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Part I, paragraph 5.7, contains guidance on planning specialists' off-site examinations of components.

Specialist examinations may range from a scanning electron microscope (SEM) examination of a failed part to chemical analysis, and/or aircraft systems testing or flight testing. Laboratory examination and testing generally entail the use of specialized equipment not available at the accident site and are often beyond the capability of an aircraft maintenance facility. The Bureau may give consideration to using the component manufacturer's facilities where specialized equipment and trained personnel are readily available. However, this should require close supervision by the Bureau's Safety Investigators, or by Safety Investigators designated by the Bureau to ensure that there is no real or perceived conflict of interest. All activities, particularly disassembly and testing phases, should be documented and photographed for evidence purposes.

Specialist examinations may also be needed to conduct the read-out and decoding of information from other electronic devices, such as satellite navigation equipment (e.g. GPS, GLONASS, GPWS, TAWS, FMS).

Laboratory testing should not be limited to standard tests. In addition to testing for compliance with appropriate specifications, it may sometimes be necessary to determine the actual properties of the specimen (such as metal, material, fuel and oil). Occasionally, it is necessary to devise special tests that fully exploit the components capabilities. A wide range of specialized testing equipment permit simulation of a variety of malfunctions.

When Safety Investigators send failed parts or components for laboratory testing, they should provide as much information as possible relative to the circumstances contributing to the failure of such parts or components, including their own hypotheses/suspicions. The information provided by the Safety Investigator is intended only as a guideline to the specialist who should, nevertheless, explore all relevant aspects. It is not sufficient for an Safety Investigator to send parts for specialist examination with the innocuous instructions "for testing". The Safety Investigator should provide a detailed history of the part or component, covering such items as:

a) the date it was installed on the aircraft;

b) the total number of service hours;

c) the total number of hours since the last overhaul or inspection;

d) previous difficulties reported; and

e) any other pertinent data that might shed light on how and why the part or component failed.

Note.— If not accompanied by a Bureau's Safety Investigator, arrangements should be made for supervision by an Safety Investigator from the State where the testing is to take place, or an Safety Investigator from another State, or properly designated independent person.

In order to preserve evidence, it is essential that failed parts and components requiring specialist examination be extracted from the wreckage with care. Consultations with experts from the aircraft manufacturers and airlines should be held to ensure proper decisions. Aircraft systems, whether mechanical, electrical, hydraulic or pneumatic, will be removed in sections as large as practicable. Relevant sections should preferably be dismantled rather than cut off. Paint smears, which are often extremely important in collision accidents and in-flight failures, require protection. This also applies to smoke or soot smears.

9.2 PRACTICAL ARRANGEMENTS

The nature of the specialist examinations and the type of components and systems to be tested should determine the facility to be chosen. The Safety Investigator must be confident that the facility chosen is capable of providing the required examination and testing. Prior arrangements should be made with the facility as far in advance as practicable so that the management of the facility can plan the tests and assign personnel and equipment.

When choosing a system and components for specialist examination and testing, it is desirable to include as many components of the system as practicable, e.g. wiring harnesses, relays, control valves and regulators. Tests conducted on a single component should reveal information about the operation of that particular unit only, whereas the problem may actually have been in one of the related components. The most valid test results should be obtained by using as many of the original system components as possible.

Each component should be tagged with its name, part number, serial number and the accident identifier. The Safety Investigator should maintain a listing, descriptive notes and photographs of all components, which are to be tested; the components themselves should be kept in protective storage until ready for shipping.

Components should be packed to minimize damage during transport. Particular care should be taken to ensure that fracture surfaces are protected by appropriate packing material so that surfaces coming into contact with each other or with other parts do not suffer any damage.

Whenever possible, power plants should be shipped in their special stands and containers. Other heavy components, such as flight control power units, stabilizer screw jack assemblies and actuators, should be packed in protective wrapping and placed in separate wooden containers. Blocks or bracing should be installed inside the containers to prevent any movement of the component during transport. Smaller and lighter components should be shipped in the same manner with more than one to a box, but in a way which should prevent them from coming into contact with one another. Very light units should be packed in heavy corrugated pasteboard cartons with packing material sufficient to prevent damage from mishandling during transport. The Safety Investigators should label all boxes and cartons appropriately and should make an inventory list for each container.

Occasionally, it may be necessary to send a part, or parts, of a damaged aircraft to another State for technical examination or testing. In accordance with ICAO Annex 9 *Facilitation*, Chapter 8, Section B, each State concerned shall ensure that the movement of such part, or parts, is effected without delay. The States concerned shall likewise facilitate the return of such part, or parts, to the State conducting the investigation.

9.3 NOTES AND TEST RESULTS

Prior to conducting the examinations and tests, the Safety Investigator(s) and the facility personnel involved should be briefed on the type and extent of the tests to be carried out and should review the test procedures to ensure their adequacy. Basically, a written test plan should be prepared and agreed to by all participants before proceeding with any testing. The test plan becomes a written record of the planning and conduct of the component investigation.

Note.— A good technique for developing a test plan is to ask the manufacturer of the component to prepare a draft test plan protocol, which should then be reviewed and agreed upon by all participants in the examination. However, the final decision on the test plan rests with the Bureau.

Any discrepancies found during testing should be photographed and documented with an explanation as to their bearing on the operation of the system or component. It should be kept in mind that the tolerances called for in the test procedures may only apply to new or overhauled components and that components which have been in service for some time may have acceptable limits outside these tolerances. If the nature of the discrepancy so warrants, a component should be disassembled following completion of the tests to ascertain the cause of failure. Photographs should be taken of the parts prior to and during disassembly, and the findings should be documented in writing.

Consideration should be given to X-raying components before disassembly if the position of springs, contacts, etc., could be lost during the disassembly.

Off-scene tests and examinations should be completed under the same rules and procedures for the on-scene phase, which excludes non-technical personnel. However, in some cases, other personnel, not part of the investigation team, may be

ordered to participate or observe by a judicial authority. In such cases, Safety Investigators must ensure that they do not discuss their opinions, or make comments on any findings or analyses in the presence of these non-technical third parties.

If insurance loss assessors or other parties, who are not part of the investigation team, have been approved to attend and observe the disassembly, the Safety Investigator and test facility personnel must take extreme care. Findings and analyses should not be discussed in the presence of non-investigation personnel, because they may use such information inappropriately.

Following completion of the testing, the Safety Investigator(s) and facility personnel should review and discuss the results. When there is agreement that the data gathered present a true and factual picture of the condition and capabilities of the components, the notes and test results should be reproduced into field notes to serve as a record of the examination and testing of the system or component.

REPORTING

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10.0 WRITING FINAL REPORT AND MAKING SAFETY RECOMMENDATIONS

10.1 GENERAL

The Accident Investigation Bureau will issue a Final Report for all investigations. The format and content of the Final Report should be in accordance with guidance contained in the Appendix to ICAO Annex 13 and in the ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Part IV *Reporting*. The circumstances of an occurrence and the safety issues involved should determine the size and scope of the Final Report. For all occurrences involving aircraft registered, operated, designed, or manufactured outside Nigeria full adherence to the ICAO format should be maintained. In accordance with ICAO Annex 13, the report should be clear and concise.

It is the policy of the Bureau to complete and to make the Final Report publicly available as soon as possible. The Final Report may be made public by posting it on the Bureau's internet website, as well as by sending a hard copy to all States involved and ICAO, as per Annex 13 provisions.

After the completion of the field phase of the investigation, the IIC should develop a report completion schedule that includes target dates for completion of the Final Report. Target dates should be consistent with the complexity of the safety issues involved in the occurrence.

The general target date for completion of "small" occurrence investigations with minimal safety issues is not more than six months from the date of the occurrence. The target date for completion of major occurrences with complex safety issues is usually twelve months, or as soon as possible.

If for some reason the Final Report cannot be made publicly available within twelve months, the Bureau make an interim statement publicly available on each anniversary of the occurrence, detailing the progress of the investigation and any safety issues raised. The Bureau may also issue interim reports and/or safety recommendations, at any time deemed necessary to highlight any safety issues that may be of interest to other States and/or organizations.

10.2 GROUP REPORTS

10.2.1 Field notes

Each investigation group completes "Field notes" during the field phase of the investigation and for all component examinations and test work. Field notes should be completed in the same format as factual reports (see 10.2.2 below). Upon completion of the field notes, each member of the group should sign them signifying their agreement with the content, accuracy, and completeness. If any of the group members did not take part in some portion of the fact-finding, this aspect should be noted under his/her signature. Similarly, if differences cannot be resolved between a group member and the group chairperson, the substance of the disagreement should be stated in the field notes under the signature.

10.2.2 Factual reports

Factual reports are derived from the field notes and enhanced with follow-up investigation work.

In consultation with the group members, the group chairperson is responsible for scrutinizing the evidence gathered in relation to the tasks assigned to the group, and for drafting a group report, which presents all the facts relevant to the activities of the group. The group factual report may also include attachments to the report (e.g. maps, charts, or other documents) that support the written record of the investigation. Referred to as the "group factual report", the draft should be shared with other specialists who participated in this phase of the investigation, as well as accredited representatives and their advisers participating in the investigation. This consultation is for the purpose of ensuring completeness and accuracy, hereafter referred to as the "technical review" (see 10.3 below). After consultation and revision of the group factual reports, copies should be provided to all organizations and specialists that participated in the investigation.

A group factual report should be presented in the following format:

	Flight Operations Group Factual Report (or Field Notes) / (date)	
A.	*Accident:* *Location:* *Date/Time:* *Aircraft:*	*XXXX (identifying code number assigned by Accident Investigation Bureau)* *XXXX [city, State, country]* *XXXX* *XXXX [make, model, registration]*
B.	*Group members* *XXXX Group chairperson* *XXXX Airline specialist* *XXXX [CAA] specialist* *XXXX Manufacturer specialist*	
C.	*Summary* *This section should provide a synopsis of the occurrence, such as flight number, take-off time, accident time (if known), number of persons on board, injuries, etc. This section also should contain a brief synopsis of the scope of the group's work. The terms of reference for the group and subgroups and brief details of the time and location of investigation activities should also be recorded in this section. For example, "the Flight Operations Group interviewed the pilots, reviewed records, and conducted simulator work" and, "the Aircraft Systems Group documented the aircraft components on-scene, removed some parts, and conducted component examinations at the facilities of the manufacturer".*	
D.	*Details of Investigation* *The facts, conditions and circumstances established by the group and investigation findings (factual) should be presented under appropriate headings describing the areas investigated. For example, in the case of the Flight Operations Group, headings would include crew histories, flight planning, dispatch and aircraft mass and balance. All the relevant facts, whether or not considered significant to the findings of the group, should be included. Relevant documentation should be attached to the group report.*	

10.3 REVIEW MEETINGS

10.3.1 Technical Review

Once the investigation is complete and all group reports and other factual data are available, the Commissioner/CEO or any officer designated by the CEO should convene a technical review meeting at which all of the factual materials collected during the investigation should be reviewed one last time, before the writing of the Final Report is initiated. Accredited representatives and their advisers, and other parties that participated in the investigation have one more opportunity to ensure that the factual record of the investigation is complete, objective, and accurate. The IIC should attempt to achieve full concurrence with all of the factual material before moving to the Final Report writing phase.

In some smaller accident cases, the technical review meetings could be held by conference call or by email and correspondence. However, for major airline accidents with complex safety issues, a full technical review meeting should be convened.

At the completion of the technical review, if full concurrence about the factual data collected cannot be reached, the investigation may need to be re-opened to resolve disagreements. Any unresolved differences should be noted in the factual record of the investigation.

10.3.2 Investigation Planning Meeting

Subsequent to the field phase, significant investigation work remains, and the Investigator-in-charge must work diligently to maintain and manage the progress of the investigation. In general, the post-field phase involves:

a) the continued collection and validation of evidence;

b) the examination of all pertinent personnel, company, aircraft, facility, government and other records;

c) the examination of selected wreckage in the laboratory;

d) the testing of selected components and systems;

e) the reading and analysis of recordings; the conduct of further interviews; the determination of the sequence of events;

f) the analysis of all investigation information; and completion of technical and group reports, if any.

The post-field phase can take many months, depending on the size and complexity of the investigation.

It is always a challenge to ensure that the investigation continues to progress following the field phase, for the most part because the members of the investigation team are no longer centrally located, and subject matter expertise is no longer readily available. As a result, the group chairpersons and the Investigator-in-charge will have to increase their efforts to maintain communication with team members and to ensure that investigation tasks are completed on time.

In this regard, the Investigator-in-charge should have frequent, regularly scheduled, decision oriented team meetings, and have additional meetings for significant issues or for issues that will require a change to the investigation plan.

Specifically, it is prudent for the Investigator-in-charge to convene an investigation planning meeting soon after the team returns from the accident scene. The meeting should be attended by the group chairmen and senior management and should provide for a discussion of the scope of the investigation, the primary issue areas, and the scheduling of future investigative tasks. All team members should understand that they do not have to wait for a meeting to communicate significant, new information.

Thus, investigation planning meeting should develop investigation project with timelines on Excel Spread Sheet covering all activities months from date of occurrence to publishing the Final Report. This should be communicated to management and all investigation team members.

Note - To ensure the continued progress of the investigation, the Investigator-in-charge should ensure that all team members regularly refer to the Investigations Management System Event Flow Chart and the applicable sections of the *Investigations Management System Event Checklist*.

10.3.3 Management Review

1) Initial management meeting

In the first week after occurrence, the management should hold initial meeting with all available for brainstorming on investigation activities (and alternatives with pros and cons), evaluation of activities and making decisions.

The meeting should focus on:

i. purpose of the investigation

ii. possible findings

iii. cost estimates in terms of man-hour and finance required

iv. whether to transfer the investigation of the occurrence to NCAA

v. decide on investigation plan - WHO, HOW, WHERE, WHEN will it be ready/ finalized with timeframe and milestones

2) Management Monthly Follow-up Review

There shall be monthly meeting of the management with all IICs of open/ active investigation to brief management on the following:

a) oral as well as short written progress report on all on-going investigations

b) review accuracy of planned investigation time frame

c) identify needs for more or other resources

d) take measures to get a delayed/lagging investigation back on track

e) allocate more resources

3) Investigation Quality Follow-up

Three (3) months after publishing the Final report, there should a quality review of the investigation process and layout of the final report viz-a-viz findings, causes and safety recommendations.

The investigation team and one (1) independent investigator should carry out the quality review. The review should ask the following questions:

a) What was good and not so good?

b) What should we have done differently?

c) Was the allocated time frame reasonable?

d) Was the cost reasonable?

4) Annual Bureau Quality Follow-up

The Bureau should conduct analysis of all investigation quality follow-ups to:

a) Determine trends

b) Identify successful procedures

c) Identify common mistakes

d) Identify lessons learned

e) Review comments received from accredited representatives and advisers

f) Identify need for changes to governing documents (iPPM, Guidance Materials, etc)

10.3.4 Interim Statement

A. The status of all open investigation reports shall be monitored using excel spread sheet to indicate their anniversary dates. The up-to-date status of each ongoing report shall be reported by the IIC during the monthly management review meetings.

B. The Bureau has established an accident and incident database in Microsoft Excel that is also used as a means of tracking the status of open investigations. The Director of Engineering is responsible for updating and maintenance of the database. The Director of Engineering will conduct a monthly review of the database to identify all the open investigations that are one month to their anniversary. The Director of Engineering will direct the concerned IIC to draft an Interim Statement, detailing the progress of the investigation and any safety issues that are raised. The Commissioner shall make the Interim Statement public on the anniversary of the date of occurrence.

C. In addition, if during monthly management review of all open investigations, it appears that for some reason the target date for releasing Final Report within 12 months cannot be feasible; the Commissioner shall request the IIC to draft an interim statement to be made publicly available on each anniversary of the occurrence, detailing the progress of the investigation and any safety issues that are raised.

D. The interim report shall be posted on the Bureau's internet website.

10.4 FORMAT OF THE FINAL REPORT

10.4.1 General

All the Bureau's accident and incident reports should contain the following reference to the objective of the investigation in the Introduction or Foreword:

> *In accordance with ICAO Annex 13, it is not the purpose of aircraft accident and incident investigation to apportion blame or liability. The sole objective of the investigation and the Final Report is the prevention of accidents and incidents. (Reference: ICAO Annex 13, Chapter 3, paragraph 3.1.)*

The Appendix of ICAO Annex 13 contains the general format for the Final Report. Furthermore, detailed guidance regarding the format and content of the Final Report is contained in the ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Part IV *Reporting,* Appendix 1 to Chapter 1. The ICAO format and guidance should be followed for most AIB Final Reports. For some incidents and non-major accidents, the format of the report may differ, as all of the ICAO Annex 13 headings may not be applicable.

10.4.2 Chapters 1 and 2 of the Final Report

The Bureau will follow the ICAO format for Chapters 1 and 2 of the Final Report. Chapter 1 *Factual Information* should contain a comprehensive record of the facts, conditions, and circumstances established in the investigation. Chapter 2 *Analysis* should contain the significance of the relevant facts and circumstances that contributed to the accident or incident. This portion of the report should also contain the identification of safety deficiencies uncovered during the investigation, regardless of whether those deficiencies contributed to the accident. Supporting documents that are required to support the facts, analysis, conclusions, and recommendations should be included in appendices to the Final Report.

10.4.3 Chapter 3 of the Final Report — Conclusions

The Bureau will include in Chapter 3 of the Final Report a list of findings, the Causal factors and Contributory factors, which should include both the immediate and the deeper systemic causes. AIB uses the guidance provided in the ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Part IV *Reporting*, Appendix 1 to Chapter 1, Table 1-3 *Example of causal statements*, and Appendix 2 to Chapter 1 *Report Writing Conventions*, in the formation of its findings, causes and contributing factors. The Bureau will also include the following statement at the appropriate location in Chapter 3: *The identification of causes does not imply assignment of fault or the determination of administrative, civil or criminal liability.*

10.4.4 Chapter 4 of the Final Report — Safety Recommendations

The Bureau will include in Chapter 4 of the Final Report both safety recommendations made for the purpose of accident prevention, as well as any safety (corrective) actions taken during the course of the investigation. It will use the guidance provided in ICAO *Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Part IV *Reporting*, Chapter 1, when issuing safety recommendations during the course of the investigation and in its Final Reports. *(See 10.8 for further details on safety recommendations.)*

10.4.5 Security and Access Control Measures for Draft Reports and Investigation Documents

a) The draft Report shall be drafted only on an investigator's password enabled computer.

b) The draft shall then be transferred to the Review computer which in the custody of the Director of Engineering (DOE) or Director of Operations (DOO) or any officer designated by them

c) Access to the computer shall be restricted and only a member of the investigation team who signs the appropriate register, shall have access to it for the review

Note 1. – All safety investigation reviews shall be carried out using the Bureau's dedicated computers

Note 2. – Draft Final Report shall have "Confidential" water mark inscribed

d) Back up of all the reviews of accident/incident draft reports shall be kept in a hard drives with DOE or DOO. All Back up shall be retained for a minimum of 12 months after the Final Report has been published.

e) Access to the investigators' offices shall be restricted to authorized persons only.

f) Upon receipt of draft report or any part thereof or any documents obtained during an investigation of an accident or incident , the Bureau shall not circulate, publish or give unauthorized access to it, without the express consent of the State, which conducted the investigation, unless such report or documents have been published or released by the investigating authority.

g) The person issuing the draft Final Report or any documents obtained during investigation shall brief the recipient on the need to maintain its confidentiality until the Final Report is made publicly available by the Bureau or authority conducting the investigation.

10.5 CONSULTATION

A. The Bureau follows the consultation provisions of ICAO Annex 13, Chapter 6. A confidential draft Final Report will be forwarded to all States that participated in the investigation requesting their substantive and relevant comments. The States include:

a) the State that instituted the investigation;

b) the State of Registry;

e) the State of the Operator;

f) the State of Manufacture; and

g) any State that participated in the investigation.

B. In order to obtain substantive technical consultation on the draft Final Report, the Bureau will send, through the State of the Operator, a copy of the draft Final Report to the operator to enable the operator to submit comments. Similarly, the Bureau will end, through the State of Design and the State of Manufacture, a copy of the draft Final Report to the organizations responsible for the type design and the final assembly of the aircraft to enable them to submit comments.

C. The letter of transmittal for the draft Final Report will indicate that the State receiving the draft Final Report shall forward it to the airline operator, organizations responsible for design and assembly of the aircraft for their comments. It will also request each recipient to notify the Bureau of any interim safety actions taken, or safety actions under way, that can be included in the Final Report.

D. Comments should be received within sixty (60) days, unless a mutually agreed delay is granted. If the comments from another State are accepted, the draft Final Report should be amended. If the Bureau does not agree with the comments, in part or in whole, then the comments from that State may be appended to the Final Report, unless that State elects not to have their comments appended.

E. The draft Final Report will also be forwarded to the key parties in the country (the airline operator, Nigerian Civil Aviation Authority (NCAA), Federal Airports Authority of Nigeria (FAAN), Nigerian Airspace Management Agency (NAMA), etc.) that participated or provided significant information in the investigation in order to obtain their substantive and relevant comments. The same procedures for timing of receipt of comments and handling of the comments as specified in ICAO Annex 13, Chapter 6 will be followed for the parties from the country.

Note. —The Bureau will include intended safety recommendations in the Draft Final Report, inviting comments from recipients.

F. Upon receipt of a draft Final Report from the State of Occurrence or State that conducted the investigation, the Bureau will forward copies of the confidential draft Final Report to all interested parties of the investigation within Nigeria (Airline Operator and NCAA) requesting their substantive and relevant comments.

G. The Bureau shall ensure all recipients are aware of the need to maintain the confidentiality of the draft Final Report or any part thereof or any documents obtained during an investigation of an accident or incident.

10.6 RECIPIENTS OF THE FINAL REPORT

In addition to the publication on its internet website, the Bureau will forward with minimum delay a copy of the Final Report to:

a) the State that instituted the investigation;

b) the State of Registry;

c) the State of the Operator;

d) the State of Design;

e) the State of Manufacture;

f) any State that participated in the investigation;

g) any State having suffered fatalities or serious injuries to its citizens; and

h) any State that provided relevant information, significant facilities or experts.

10.7 DISTRIBUTION AND PUBLICATION OF FINAL REPORTS

The Commissioner shall cause the report of an investigation into an accident or incident, other than an accident or incident whose investigation was delegated to Nigeria by another State or RAIO, to be made public in the shortest time possible (and, if possible, within 12 months of the date of the occurrence) and in such manner as he/she considers fit.

Lessons learned during the investigation contained in the Final Report are important for improving aviation safety. Wide distribution of the Final Report is essential for the prevention of future occurrences and to inform the general public. Accordingly, the Bureau will adhere to the requirements of ICAO Annex 13, paragraph 6.5 and will make Final Reports publicly available as soon as possible and, if possible, within twelve (12) months.

The Bureau shall forward a copy of the Final Report to the President of the Federal Republic of Nigeria through the Minister supervising civil aviation.

The Bureau will distribute copies of the Final Report to all State of Registry, State of Operator, State of Design, State of Manufacture, States that provided relevant information, significant facilities or experts, as well as to the families of the victims of the accident when requested.

The Bureau will also forward copies of the Final Report to ICAO, when the aircraft involved has a maximum mass of over 5 700 kg.

Transparent distribution to the general public assists in maintaining public confidence in the aviation system. The Bureau will make the Final Report available to the general public on its internet website.

If the Final Report cannot be made publicly available in twelve (12) months, the Bureau will make an interim statement publicly available on each anniversary of the occurrence, detailing the progress of the investigation and any safety issues raised.

10.8 SAFETY RECOMMENDATIONS

10.8.1 General

The purpose of accident and incident investigations is to advance safety by identifying safety issues, deficiencies and underlying/contributing factors that pose a risk to future operations. If, at any stage of an investigation, the Bureau becomes aware of a critical safety issue, the Bureau shall recommend to the concerned organization any preventive action that it considers necessary to be taken promptly to enhance aviation safety. Safety recommendation would be made in the Final Report of the investigation, in situations wherein immediate action is not needed, or wherein the deficiency is not clearly defined and justified until the Final Report stage.

The Bureau Safety Investigators will provide information on any safety issues identified, safety actions already taken, and proposals for safety recommendations to be considered for inclusion in the Final Report. The *ICAO Manual of Aircraft Accident and Incident Investigation* (Doc 9756), Part IV *Reporting*, contains detailed guidance on formulating safety recommendations and language for writing safety recommendations.

10.8.2 Validation of a Safety Issue/Deficiency

A safety recommendation would be warranted if the analysis of the investigation information determines the existence of an underlying factor(s) with high risks and for which the defences are less than adequate. A safety recommendation would be issued at any time during the investigation whenever it is assessed that there is an immediate risk to the conduct of air operations and an urgent need for immediate formal communications with the action addressee responsible for the matter. A safety recommendation would be made in the Final Report of the investigation in situations wherein immediate action is not needed, or wherein the deficiency is not clearly defined and justified until the Final Report stage.

In addition, the Bureau may also make safety recommendations arising from safety studies or other fact finding and analysis exercises.

Furthermore, the Bureau will encourage that all participants in an investigation take appropriate and immediate safety actions to correct identified safety deficiencies, without the need for the issuance of formal safety recommendations.

10.8.3 Writing Safety Recommendations

To be effective, a safety recommendation must present a compelling argument for safety action to mitigate the risks identified by the investigation. A clear, succinct and well-structured safety communication would facilitate this objective.

The following are some qualities of a good safety recommendation:

a) There is a clear and positive link to a safety significant event;

b) Data are accurate and indisputable;

c) The analysis is sound;

d) The safety recommendation is addressed to the entity best able to take the corrective action;

e) The recommendation is achievable;

f) There is a significant risk in being too prescriptive;

g) A performance-based recommendation will make the action taken in response to a recommendation more measurable by both the accident investigation authority and the safety recommendation action addressee

h) A good recommendation is one that is written in a way that clearly states the deficiency, the action required to mitigate the risk and the expected result of action being taken.

The following are some characteristics of a weak safety recommendation:

1) The action addressee is not identified;

2) Too many action addressees:

3) The action addressee does not have the mandate to mitigate the identified deficiency:

4) The addressee is not the one that can correct the deficiency on a systemic level;

5) The factual information is incorrect or inappropriately skewed;

6) The logic linking facts, analysis and conclusions is flawed;

7) The risk or consequences are exaggerated;

8) The recommendation is not based on a finding or a cause/contributing factor ;

9) The recommendation is too specific;

10) The recommendation is too broad;

11) The recommended action is not achievable;

12) The performance expectations of the recommendation is unclear;

13) Too many recommendations in a report;

14) Recommendations made on low-risk issues;

15) A recommendation based on a single, local event; and

16) The recommendation is not clearly identified.

The following is a framework for a safety recommendation:

i. introduction section which should include the background such as the date, aircraft type, location of the occurrence description of what happened, identity of the investigation authority, the investigation number, the status of the investigation, the safety significant event associated with the safety issue, along with the adverse consequence(s) that resulted from the associated unsafe condition;

ii. The Safety recommendation section which should include the recommended safety action (risk-control options), including the performance expectations.

Note 1.- *Attachments supporting the integrity of the factual information and argument for change could be appended to the recommendation document, such as, but not limited to, statistics, lists of similar previous occurrences, technical and scientific analyses, and flight data recorder printouts and analyses.*

Note 2.— For safety recommendations issued in Final Reports, the above information are included in the factual information, analysis, conclusions, recommendations and attachments sections of the Final Report.

10.8.4 Addressees of Safety Recommendations

Safety recommendations shall be specific, measurable, achievable, realistic and targeted to an entity or organization that is best able to take action to mitigate the risks, has the authority and responsibility to take remedial action and has the mandate to take action that will have the broadest impact. For safety recommendations of global concern (SRGC), the action addressee normally would be the Sate civil aviation authority responsible for the certification and oversight, in part, of the design, manufacture, maintenance and/or operations of the aircraft or facilities involved in the occurrence. The timing of safety communication is influenced by the degree of risk associated with the underlying safety issue.

There shall only be one principal action addressee for each recommendation. Having multiple to avoid a situation where there could be uncertainty as to what addressee is responsible for taking safety action; and to avoid making it difficult to track and

evaluate action taken in response to the recommendation. In such situations, it would be preferable to send the recommendation independently to each addressee.

The covering letter for the safety recommendation shall include the following information:

a) The specific addressee for a safety recommendation should be the head official of the organization who is best suited to implement the required safety action This could be, but not be limited to, the government minister, director general, secretary general or chief executive officer;

b) The safety recommendation letter must be dated;

c) Occurrence summary (see framework section);

d) Purpose of the safety recommendation;

e) Safety deficiency statement;

f) Recommended safety action(s); and

g) Requirement to respond within 90 days regarding:

   i. Actions taken;

   ii. Actions planned including alternative actions, if applicable; or

   iii. Reasons why no action will be taken.

Note.— For safety recommendations issued in the Final Report, a separate cover letter should be sent to each head official deemed responsible for taking action on a safety recommendation.

10.8.5 Distribution of Safety Recommendations

The purpose of safety communication is to ensure that identified risks are communicated to those entities or organizations best able to effect change and to convince them to take remedial safety action. The openness of Annex 13 investigations and the involvement of stakeholders in the investigation process should encourage the involved organizations/stakeholders to take action before a recommendation is made.

Copies of the safety recommendation shall be sent to persons or organizations in the aviation community that have a direct interest in the safety issue which was the basis for the safety recommendation, as well as to other members of the aviation community who would benefit from the information, including but not limited to, the following:

a) The safety recommendation action addressee;

b) Involved government departments;

c) Involved States and accident investigation authorities;

d) Involved stakeholders, such as, but not limited to, the airline, maintenance organization, manufacturer, air traffic services provider and airport operator; and

e) Others who may benefit from lessons learned.

f) ICAO Accident Investigation Section for SRGC.

Note.- Although the Bureau may post its safety recommendations on its website, however, for the purpose of advancing the safety of operations, copies of the safety recommendations will also be sent to those persons or organizations of the aviation community that have a direct interest in the safety issue or who would benefit from the information that was the basis for the safety recommendation.

The Bureau's safety recommendations will be transmitted in dated letters to the appropriate entities or organizations within the country, as well as authorities or entities in other States concerned and, to ICAO, when international standards and recommended practices contained in the ICAO Annexes and ICAO guidance materials are perceived deficient.

10.8.6 Follow-up of Safety Recommendations

The purpose of a safety recommendation is to ensure that identified risks are communicated to those entities or organizations best able to effect change and to convince them to take remedial safety action. In this regard, the issuance of safety recommendations by the Bureau can be viewed as the most important output of the investigation.

The full potential of recommendations to prevent future accidents and incidents cannot be realized until appropriate safety action to mitigate the risks underlying the recommendation is taken by the entity to which the recommendation was issued. Measuring the effectiveness of safety recommendations to achieve positive changes requires an evaluation of the actions taken against the performance expectations of the safety recommendation. Refer to Figure 10-1 for a typical flow diagram for tracking safety recommendations.

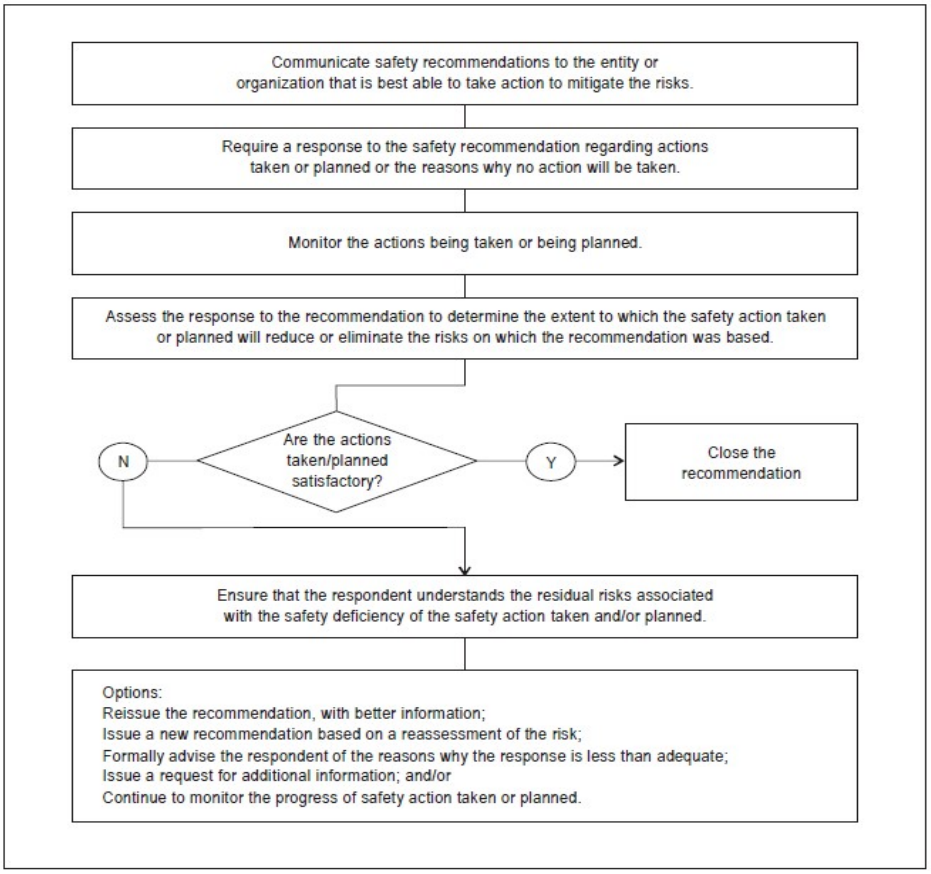

Figure10-1: Typical flow chart for tracking safety recommendations

The Bureau has established a Safety Recommendation Monitoring Committee saddled with the responsibility of monitoring implementation and effectiveness of the Safety recommendations made.

The Bureau also has a Safety Recommendation "Tracking System" to ensure follow-up on safety recommendations issued to organizations in Nigeria and to other States to determine if safety actions have been taken to satisfy the recommendations, if actions are planned, or the reasons why the recipients are not taking actions.

The Committee conducts visits to aviation organizations within Nigeria on a periodic basis to implementation and effectiveness of the safety recommendations made to addressees.

The Committee shall establish a direct staff-level liaison with the accident investigation authority of the State responsible for responding to the recommendation in order to arrange for routine updates as to the status of the action taken and/or action planned.

For situations where a response is not received within the prescribed 90 days, Bureau will formally request a status report from the action addressee to which the safety recommendation was made.

Records of all outgoing and incoming safety recommendation follow-up correspondence with Nigerian organizations and with other States shall be maintained in respective files and on the Bureau work station server as part of the accident investigation files at the Bureau.

10.8.7 Process for Assessing Responses and Action Taken

The purpose of evaluating the safety action taken and/or planned is simply to determine whether further safety action is required.

The following is a process for assessing responses to recommendations:

a) Review the recommendation to confirm the performance expectations of the recommendation;

b) Review the response to the recommendation to determine the extent to which the addressee has accepted the existence of the safety deficiency underlying the recommendation;

c) Assess the extent to which the safety action taken or planned will reduce or eliminate the risks on which the recommendation is based;

d) Reassess the residual risks associated with the safety deficiency, taking into account the safety action taken and/or planned; and

e) Categorize the response in terms of risk mitigation.

The Bureau will inform the State responding to a recommendation, in writing, of its assessment of the response as well as post the assessments of the responses to the recommendations on the Bureau's website.

Prior to making public its assessment of responses to its recommendations, the Bureau shall provide advance notice to the State responding to the recommendation of its intent to do so.

For each SRGC, the Bureau will provide the ICAO Accident Investigation Section with a copy of the responses to its recommendation and the status of the recommendation.

If it is assessed that a response to a safety recommendation is less than adequate, the Bureau will contact the authority responsible for taking action on the recommendation to ensure that:

i. the recipient of the recommendation understands the recommendation and the risk level associated with the safety deficiency;

ii. the Bureau understands the substance of the response to the recommendation, including the potential of the action taken and/or action planned to mitigate risk; and

iii. the recipient of the recommendation understands the residual risks associated with the safety deficiency, taking into account the safety action taken and/or planned.

The follow-up options to a less-than-adequate response would vary based on the level of residual risk and the urgency for additional safety action. The following are some options that will be considered:

1) Reissue the recommendation, with changes, additional clarification and/or better information;

2) Issue a new recommendation based on a reassessment of the risk of the underlying deficiency;

3) Formally advise the action addressee of the recommendation as to the investigation authority's assessment of the response, including the reasons why the response is less than adequate;

4) If appropriate, inform ICAO and/or other States about a less-than-adequate response to a recommendation;

5) Issue a request for additional information from the safety recommendation action addressee; and/or

6) Continue to monitor the progress of the safety action taken or planned.

10.8.8 Handling Safety Recommendations received from other States

Upon receipt of letter of transmittal of safety recommendations from another State, the Bureau will forward copies of the transmittal letter to the addressees (NCAA, Airline Operator) within Nigeria requesting them to provide their responses in terms of acceptance of the safety recommendations, proposed corrective actions with corrective action plan before the elapse of the prescribed ninety (90) days.

The Bureau will inform the proposing State, within ninety (90) days of the transmittal correspondence, of safety actions taken or under consideration, or the reasons why no actions will be taken.

10.9 REOPENING OF AN INVESTIGATION

If, during the course of an investigation, even after the Final Report has been released, new factual information becomes available, or if the original analyses were determined to be in error, the Bureau will reopen the investigation to examine any new evidence or erroneous analyses, using the same procedures for the original investigation. Depending on the results of the reopened investigation, the Bureau will correct the factual record of the investigation and publish a revised Final Report, if necessary.

10.10 ACCIDENT AND INCIDENT DATABASE

The Bureau shall keep a database of all accidents and incidents it investigated for effective analysis and management of information. The database will include aircraft type, serial number, registration marks, airline operator, nature of occurrence, date of occurrence, place of occurrence, injuries and fatalities.

11 REPORTING TO THE ICAO ACCIDENT/INCIDENT DATA (ADREP) REPORTING SYSTEM

11.1 ADREP PRELIMINARY REPORTS

When the aircraft involved in an accident is of a maximum mass of over 2 250 kg, the Bureau will send the Preliminary Report (reference to ICAO Annex 13, Chapter 7, paragraph 7.1) to:

a) the State of Registry or the State of Occurrence, as appropriate;

b) the State of the Operator;

c) the State of Design;

d) the State of Manufacture;

e) any State that provided relevant information, significant facilities or experts; and

f) ICAO.

When an aircraft involved in an accident has a mass of less than 2 250 kg and when airworthiness or matters considered being of interest to other States are involved, the Bureau will forward the Preliminary Report (reference to ICAO Annex 13, Chapter 7, paragraph 7.2) to:

i. the State of Registry or the State of Occurrence, as appropriate;

ii. the State of the Operator;

iii. the State of Design;

iv. the State of Manufacture; and

v. any State that provided relevant information, significant facilities or experts.

The Preliminary Report should be sent within 30 days of the date of the accident. When matters directly affecting safety are involved, the Preliminary Report will be sent as soon as the information is available and by the most suitable and expeditious means available (reference to ICAO Annex 13, Chapter 7, paragraph 7.4).

The Bureau will dispatch the Preliminary Report to the States involved and ICAO, in accordance with ICAO Annex 13, Chapter 7, paragraphs 7.1 to 7.4.

11.2 ADREP ACCIDENT/INCIDENT DATA REPORTS

When the aircraft involved in an accident is of a maximum mass of over 2 250 kg, the Bureau will send, as soon as practicable after the investigation, the Accident/Incident Data Report to ICAO. Further, the Bureau will, upon request, provide other States with pertinent information in addition to that made available in the Accident/Incident Data Report (reference to ICAO Annex 13, Chapter 7, paragraphs 7.5 and 7.6).

When the Bureau conducts an investigation into an incident to an aircraft of a maximum mass of over 5 700 kg, the Bureau will send, as soon as is practicable after the investigation, the Incident Data Report to ICAO (reference to ICAO Annex 13, Chapter 7, paragraph 7.7).

The Bureau will dispatch the Accident/Incident Data Report to the States involved and ICAO, in accordance with ICAO Annex 13, Chapter 7, paragraphs 7.5 to 7.7.

12 ACCIDENT PREVENTION MEASURES — ACCIDENT/INCIDENT DATABASE SYSTEM

12.1 INCIDENT REPORTING SYSTEMS

In accordance with ICAO Annex 13, Chapter 8, Nigeria has established a mandatory incident reporting system to facilitate collection of information on actual or potential safety deficiencies. Nigeria has also established a voluntary incident reporting system that is non-punitive and affords protection to the sources of the information. The Bureau shall support a voluntary incident reporting system of the Authority to facilitate the collection of information that may not be captured by a mandatory incident reporting system.

The Bureau shall cooperate with the Authority to maintain and implement a reporting database to facilitate effective analysis and management of information on actual or potential safety deficiencies and to determine any preventive action required in accordance with the relevant Regulations shall similarly be maintained. The database shall include: serial number, aircraft operator and type of aircraft involved, registration mark, and place of occurrence, date of occurrence, fatalities and nature of accident/incident.

The information contained in accident and incident investigation reports and in incident reporting database(s) will be analysed to determine any preventive actions required. If the analyses of data identify safety matters of interest to other States, Nigeria will forward such safety information to other States as soon as possible.

In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources including safety studies.

Regardless of the source of safety recommendations (accident/incident reports, database analyses, or safety studies), if safety recommendations are addressed to an organization in another State, such recommendations shall also be transmitted to that State's investigation authority.

The Bureau shall also support the process of mandatory incident reporting system of the Authority to facilitate collection of information on actual or potential safety deficiencies.

12.2 EUROPEAN CO-ORDINATION CENTRE FOR AVIATION INCIDENT REPORTING SYSTEMS (ECCAIRS) DATABASE, ANALYSES AND SHARING OF DATA

Nigeria adopts the European Co-ordination Centre *for Aviation Incident Reporting System (ECCAIRS) programme to meet ICAO Annex 13, Chapter 8 requirements.*

ICAO Annex 13 contains requirements for States to establish and maintain an accident and incident database to facilitate the effective analysis of information on actual and potential safety deficiencies obtained, including that from its incident reporting system, and to determine any preventive actions required.

States should consider implementing an ICAO ADREP-compatible system for their accident/incident reporting system, as well as for collecting, storing and disseminating relevant safety information.

It is noted that the European Union (EU) has established an accident and incident database based on ECCAIRS software, which is fully compatible with the ICAO ADREP system. States are encouraged to implement their accident and incident database based on ECCAIRS, which is made available at no charge.

APPENDICES

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APPENDIX A: NIGERIAN LEGISLATION ON AIRCRAFT ACCIDENT AND INCIDENT INVESTIGATION

CIVIL AVIATION (REPEAL AND RE-ENACTMENT) ACT 2006.

ARRANGEMENT OF SECTIONS

PART I- CONTROL OF CIVIL AVIATION

1. Control and supervision of civil aviation.

PART II - THE NIGERIAN CIVIL AVIATION AUTHORITY

2. Establishment of the Nigerian Civil Aviation Authority.

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3. Membership of the Governing Board.
4. Tenure of office.
5. Cessation of office.
6. Allowances, Expenses etc of Chairman and Members.
7. Functions of the Board.

PART IV-STAFF OF THE AUTHORITY

8. Director-General of the Authority.
9. Appointment of Secretary and other staff by the Board.
10. Conflict of interests
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PART V- FINANCIAL PROVISIONS

12. Air Ticket and Cargo Sales Charge.
13. Fund of the Authority.
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17. Exemption from tax.
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PART VI- INFORMATION, NOTICES ETC

19. Power to request for information.
20. Restriction on disclosure of information.
21. Service of notices.
22. Service of documents.

PART VII- MISCELLANEOUS PROVISIONS.

23. Power to Acquire Land.
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PART VII -INVESTIGATION AND ENFORCEMENT

27. Power to investigate, impose fines and enforce.
28. Directions by Minister.
29. Investigation of accidents/Accident Investigation Bureau.

PART IX-THE AUTHORITY'S POWER TO REGULATE CIVIL AVIATION.

30. Power to regulate air navigation.

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31. Functions of the Authority.

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A BILL
FOR
AN ACT TO REPEAL THE CIVIL AVIATION ACT AS AMENDED AND TO RE-ENACT THE CIVIL AVIATION ACT TO PROVIDE FOR THE REGULATION OF CIVIL AVIATION, ESTABLISHMENT OF THE NIGERIAN CIVIL AVIATION AUTHORITY AND FOR OTHER PURPOSES CONNECTED THEREWITH.

[ ] Commencement

BE IT Enacted by the National Assembly of the Federal Republic of Nigeria as follows: -

PART I- CONTROL OF AIR NAVIGATION

1. The Minister shall be charged with the responsibility for the formulation of policies and strategies for the promotion and encouragement of civil aviation in Nigeria and the fostering of sound economic policies that assure the provision of efficient and safe services by air carriers and other aviation and allied service providers as well as greater access to air transport in a sustainable manner and to assist with ensuring that Nigeria's obligations under international agreements are implemented and adhered to.

Control and supervision of civil aviation

PART II – THE NIGERIAN CIVIL AVIATION AUTHORITY

2. 2(1) There is hereby established a body to be known as the Nigerian Civil Aviation Authority (in this Act referred to as "the Authority").

Establishment of the Nigerian Civil Aviation Authority

(2). The Authority

(a) shall be a body corporate with perpetual succession and a common seal.

(b) may sue or be sued in its corporate name; and

(c) may acquire, hold or dispose of property whether moveable or immovable.

PART III. THE GOVERNING BOARD OF THE AUTHORITY

3. 3(1) The Authority shall have a Governing Board (in this Act referred to as "the Board") which shall consist of :

Membership of the Governing Board

(a) a Chairman;

(b)one representative not below the rank of a Director of the following Ministries:

(i) the Federal Ministry of Aviation or the Ministry for the time being responsible for Aviation;

(ii) the Federal Ministry of Defence or the Ministry for the time being responsible for Defence; and

(iii) the Federal Ministry of Communications or the Ministry for the time being responsible for Communications

PART VIII - INVESTIGATION AND ENFORCEMENT

Power to Investigate, impose fines and enforce

27. (1) The Authority shall have power to carry out investigations into complaints, and/or occurrence(s), save for accidents and serious incidents, after due notice to the person(s) concerned.

(2) If the Authority is satisfied after such hearing that such person(s) is or are violating any provisions of this Act, regulations, rules or orders, as the case may be, it shall by order require the person(s) to take such action consistent with the provision of this Act, regulations, rules or

Investigation of Accidents/Accident Investigation Bureau

29. (1) There is hereby established an Accident Investigation Bureau hereinafter referred to as the Bureau which shall be a body corporate with power to sue and be sued in its corporate name except for matters associated with accident reports and to acquire hold and dispose of property whether movable or immovable.

(2)The Bureau shall be an autonomous agency reporting to the President through the Minister.

(3)(a) The Bureau shall be headed by a Commissioner of Accident Investigation who shall be appointed by the President on the recommendation of the Minister.

(b) The Commissioner of Accident Investigation, who shall be the Chief Executive Officer of the Bureau, shall be appointed for a period of four (4) years renewable once for another period of four (4) years.

(4) The Commissioner of Accident Investigation shall possess cognate experience and qualification in air accident investigation of not less than 12 years.

(5 There shall be established for the Bureau a fund into which shall paid and credited:

(a) all subventions and budgetary allocation from the Government of the Federation;

(b) 3% of the air ticket contract charter and cargo sales charge imposed in Section 12 of this Act

(c) all sums accruing to the Bureau by way of gifts, endowments, bequests, grants or other contributions by persons and Organisations;

(d) returns on investments;

(e)foreign aid and assistance; and

(f) all other sums which may, from time to time, accrue to the Bureau.

(6)The services of all persons currently employed in the Accident Investigation and Prevention Bureau of the Ministry of Aviation are hereby transferred to the Bureau.

(7)The Commissioner of Accident Investigation may with the approval of the Minister recruit such staff as is necessary for the execution of its functions under this Act.

(8)There shall be appointed for the Bureau a Legal Adviser who shall be a Legal Practitioner of not less than 10 years post call experience.

(9)The Bureau in the execution of its functions under this Act shall follow and adhere to the regulations for accident investigation made by the Minster.

(10) The Minister may make regulations providing for the investigation of any accident or incident arising out of or in the course of air navigation and either occurring in or over Nigeria or occurring to Nigerian aircraft elsewhere.

(11) Without prejudice to the generality of subsection (10) of this section, the regulations made there under may in particular contain provisions:

(a) requiring notice to be given of any such accident or incident as aforesaid in such manner and by such persons as may be prescribed;

(b) applying for the purpose of investigations held with respect to any such accident or incident any of the provisions of any law in force in Nigeria relating to the investigation of deaths or accidents;

(c) prohibiting, pending investigation, access to or interference with aircraft to which an accident or incident has occurred and authorising any person, so far as may be necessary for the purposes of an investigation, to have access to, examine, remove, take measures for the preservation of, or otherwise deal with, any such aircraft;

(d) authorising or requiring the cancellation, suspension, endorsement or

surrender of any licence or certificate granted in Nigeria in pursuance of this Act or any regulation, or the withdrawal or suspension of any validation conferred in Nigeria of a licence granted by a competent authority elsewhere, where it appears on investigation that the licence, certificate or validation ought to be so dealt with, and requiring the production accordingly of any such licence or certificate.

(e) incorporating the provisions of Annex 13 to the Convention on International Civil Aviation,

(12) The sole objective of the investigation of an accident or serious incident under this Act shall be the prevention of accidents and incidents. It shall not be the purpose of such an investigation to apportion blame or liability.

(13) On the basis of the findings of accident investigations the Authority shall be informed and the Director General shall take corrective actions that, in the judgment of the Authority, will prevent similar accidents in the future.

(14) Notwithstanding the provisions of the Evidence Act CAP 112 LFN 1990, the contents of an air accident investigation report made pursuant to the provisions of this Act and regulations made there under, shall not be admissible in evidence as to form the basis of liability in any criminal or civil proceedings.

APPENDIX B: ACCIDENT INVESTIGATION BUREAU OPERATING REGULATIONS

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CIVIL AVIATION (INVESTIGATION OF AIR ACCIDENTS AND INCIDENTS) REGULATIONS 2016

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SCHEDULES

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RECORD OF AMENDMENT(S)

AMENDMENTS			
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CIVIL AVIATION (INVESTIGATION OF AIR ACCIDENTS AND INCIDENTS) REGULATIONS, 2016

PART 1—ESTABLISHMENT

Enabling powers.

1. The Minister, in exercise of the powers conferred by Sections 29 (10) Civil Aviation Act, 2006 and of all other powers enabling the Minister in that behalf hereby makes the following Regulations prescribing for :

(*a*) the manner of exercising and carrying out the Bureau s powers, duties and functions under the Civil Aviation Act ; and

(*b*) the standards that the aviation system needs to achieve compliance with the provisions of the Act.

Citation and Commencement.

2. These Regulations may be cited as the Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 2016 and shall come into force on the 25th day of February, 2016.

Interpretations.

3. The following expressions except where the context otherwise requires, shall have the following meaning :

"*Accident*"—An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down, in which :

(*a*) a person suffers a fatal or serious injury as a result of :

(*i*) being in or upon the aircraft ;

(*ii*) direct contact with any part of the aircraft, including parts which have become detached from the aircraft ; or

(*iii*) direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew, or

(*b*) the aircraft sustains damage or structural failure which :

(*i*) adversely affects the structural strength, performance or flight characteristics of the aircraft ; and

(*ii*) would normally require major repair or replacement of the affected component, except for engine failure or damage, when the damage is limited to a single engine, (including its cowlings or accessories), to propellers, wing tips, antennas, probes, vanes, tires,

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brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin (such as small dents or puncture holes), for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike (including holes in the radome) ; or

(*c*) the aircraft is missing or is completely inaccessible ;

"*Accredited Representative*"—A person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State. Where the State has established an accident investigation authority, the designated accredited representative would normally be from that authority ;

"*Act*"—The Civil Aviation Act 2006 ;

"*Adviser*"—A person appointed by a State, on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation ;

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

"*Aircraft*"—means any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth s surface ;

"*Approved Training Organisations* (*ATO*)"—An organization approved by the Authority in accordance with the requirements to perform airman and similar aviation related trainings operating under the supervision of the Authority ;

"*Authority*"—The Nigerian Civil Aviation Authority ;

"*Authorised Personnel*"—Persons permitted or allowed to participate in an investigation through appointment or nomination in accordance with ICAO SARPs ;

"*Bureau*"—The Accident Investigation Bureau ;

"*Causes*"—Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident. The identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability ;

"*Contracting State*"—Any State (including Nigeria) which is party to the Convention on International Civil Aviation ;

"*Contributory Factors*"—Actions, omissions, events, conditions, or a combination thereof, which if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. The identification

of contributory factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability ;

"*Crew*"—includes every person employed or engaged in an aircraft in flight on the business of the aircraft ;

"*Commissioner*"—The Chief Executive Officer of Accident Investigation Bureau appointed under the Civil Aviation Act, 2006 ;

"*Competent Authority*"—Any person or organization that has the legally delegated or invested authority, capacity or power to perform a designated function. If an organization, it shall be a constituted body or agency of the Federal Republic of Nigeria or Sovereign Government of another country, military or para-military brought into being by an Act of Establishment ;

"*Dangerous goods*"—Articles or substances which are capable of posing a risk to health, safety, property or the environment ;

"*Draft Final Report*"—A report sent to the relevant State, Authority and other interested parties in the investigation, inviting their significant and substantiated comments on the report within sixty (60) days from transmittal date ;

"*Fatal injury*"—An injury resulting in death within thirty days of the date of the accident ;

"*Final Report*"—The Bureau s conclusive report on the investigation into an aircraft accident or incident which includes the pertinent factual information, analysis, conclusions and when appropriate, associated safety recommendations issued by the Bureau ;

"*Flight recorder*"—Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation ;

"*Incident*"—An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation ;

"*Investigation*"—A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and/or contributory factors and, when appropriate, the making of safety recommendations ;

"*Interim Statement*"—The communication issued by the Bureau to the public on each anniversary of the accident or incident for informing those having a direct interest in the investigation regarding the progress of an ongoing investigation and any safety issues raised during the investigation ;

"*Investigator-in-charge*"—A person charged, on the basis of his or her qualifications, with the responsibility for the organisation, conduct and control of an investigation ;

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"*Maximum mass*"—Maximum certificated take-off mass ;

"*Minister*"—The Minister responsible for Nigerian Civil Aviation ;

"*Observer*"—A representative of a concerned department who is authorised by the Bureau to attend an investigation as an observer, or the Bureau s investigator authorised to attend an investigation being conducted by the concerned department ;

"*Operator*"—A person, organisation or enterprise engaged in or offering to engage in an aircraft operation ;

"*Pilot-in-Command*"—A pilot designated by the operator, or in the case of general aviation, the owner as being in command and charged with the safe conduct of a flight ;

"*Police officer*"—Any person who is a member of the Nigerian Police Force ;

"*Preliminary Report*"—The communication used for the prompt dissemination of data obtained during the early stages of the investigation ;

"*Regulations*"—Civil Aviation (Investigation of Air Accidents and Incidents) Regulations of Nigeria, made pursuant to the Civil Aviation Act, 2006 ;

"*Relevant record*"—Any item in the possession, custody or power of the Commissioner which is of a kind referred to above ;

"*Safety recommendation*"—A proposal of the Accident Investigation authority based on information derived from the investigation made with the intention of preventing accidents or incidents and which in no case has the purpose of creating a presumption of blame or liability for an accident or incident. In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies ;

"*Serious incident*"—An incident involving circumstances indicating that there was a high probability of an accident, and is associated with the operation of an aircraft which :

(*i*) in case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked ; or

(*ii*) in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time it comes to rest at the end of the flight and the primary propulsion system is shut down ;

"*Serious injury*" An injury which is sustained by a person in an accident and which :

(*i*) requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received ; or

(*ii*) results in a fracture of any bone (except simple fractures of fingers, toes, or nose) ; or

(*iii*) involves lacerations which cause severe hemorrhage, nerve, muscle or tendon damage ; or

(*iv*) involves injury to any internal organ ; or

(*v*) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface ; or

(*vi*) involves verified exposure to infectious substances or harmful radiation ;

(*vii*) involves the loss of a limb ;

"*State*"—A contracting State of the International Civil Aviation Organisation ;

"*State of Design*"—The State having jurisdiction over the organisation responsible for the type design ;

"*State of Manufacture*"—The State having jurisdiction over the organisation responsible for the final assembly of the aircraft ;

"*State of Occurrence*"—The State in the territory of which an accident or incident occurs ;

"*State of the Operator*"—The State in which the Operator s principal place of business is located or, if there is no such place of business, the operator s permanent residence ;

"*State of Registry*"—The State on whose register the aircraft is entered ;

"*State Safety Programme* (*SSP*)"—An integrated set of regulations and activities aimed at improving safety ;

"*Statement*"—The whole or any part of an oral, written or recorded statement relating to an aircraft accident given by the author of the statement to the Bureau ;

"*The Annex*"—Annex 13 to the Convention on International Civil Aviation, Chicago 1944 ;

"*Witness*"—A person require to attest to matters of facts, for this purpose, all statements taken from persons in the cause of accident investigation processes before the Commissioner or any of his designated officer there of which an affirmation may be required.

Service of Notices and other Documents Service.

4.—(1) Any notice, document, consent, approval, or other communications required or authorised by any provision of these Regulations to be served on or given to any person shall be in writing and may be served or given :

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(*a*) by delivering it to that person ;

(*b*) by leaving it at his usual or last-known residence or place of business, whether in Nigeria or elsewhere ;

(*c*) by sending it to that person by registered or recorded delivery mail, at that address ; any Notice sent by mail shall be deemed to have been duly served five working days after the date of posting or ;

(*d*) by sending it to that person at that address by telex, email, airmail, by facsimile transmission or other electronic means in a form generating a record copy to the party being served at the relevant address ; in which event the document shall be regarded as served when it is received.

(2) In any case, any delivery made in accordance with the provisions of regulation 4(1)(*b*)-(*d*) shall be deemed served after 7 (Seven) days of the date of dispatch.

PART 2—APPLICABILITY

Applicability.

5.—(1) These Regulations apply only to Accidents and Incidents Investigation activities wherever they occurred in Nigeria ;

(2) In these Regulations, the specifications concerning the State of the Operator apply only when an aircraft is leased, chartered or interchanged and when that State is not a State of Registry and if it discharges, in respect of these Regulations in part or in whole, the functions and obligations of the State of Registry.

Functions of the Accident Investigation Bureau.

The Bureau and its Functions.

6.—(1) An agency is hereby established, pursuant to the Civil Aviation Act 2006 known as Accident Investigation Bureau.

(2) The functions of the Bureau shall include, but not be limited to :

(*a*) the conduct of investigation into any accident or incident arising out of or in the course of air navigation and either occurring in or over Nigeria or occurring elsewhere as applicable to an aircraft registered in Nigeria or operated by Nigerian operator ;

(*b*) the gathering, recording and analysis of all relevant information on air safety data, in particular, for accident or incident prevention purposes, in so far as those functions do not affect its independence and entail no responsibility in regulatory, administrative or standards matters ;

(*c*) if appropriate, the issuance of safety recommendations ;

(*d*) if possible, the determination of the causes and/or contributory factor(s) ;

(*e*) the compilation, completion and publication of the Final Report.

PART 3—GENERAL

Objective.

7.—(1) The sole objective of the investigation of an accident or incident under these Regulations shall be the prevention of accidents and incidents. It shall not be the purpose of such an investigation to apportion blame or liability.

(2) The Bureau shall have independence in the conduct of the investigation and unrestricted authority over its conduct in accordance with the provisions of the *Annex* 13 to the Chicago Convention.

State Safety Programme for Accident Prevention

Incident Reporting and Systems Accident and Incident Database.

8.—(1)(*a*) In pursuance of accident and incident investigations, the Bureau shall co-oporate with the Authority to maintain and implement a safety programme to achieve an acceptable level of safety in civil aviation.

A database to facilitate the effective analysis and management of information on actual or potential safety deficiencies and to determine any preventive action required in accordance with the relevant Regulations shall similarly be maintained.

(*b*) The Database shall include: serial number, aircraft operator and type of aircraft involved, registration mark, and place of occurrence, date of occurrence, fatalities and nature of accident/incident.

(*c*) In addition to safety recommendations arising from accident and incident investigations ; where safety recommendations may result : from diverse sources including safety studies, and where safety recommendations are addressed to an organisation in another State, such recommendations shall be transmitted to that State s investigation authority.

(2)—(*a*) The Bureau shall support the process of mandatory incident reporting system of the relevant authority to facilitate collection of information on actual or potential safety deficiencies.

(*b*) The Bureau shall support a voluntary incident reporting system of the relevant authority to facilitate the collection of information that may not be captured by a mandatory incident reporting system.

(*c*) A voluntary incident reporting system shall be non-punitive and afford protection to the sources of the information.

Notification of Aircraft Accidents or Serious Incidents

Responsibility of the Bureau as a State of Occurrence.

9.—(1) The Bureau shall forward a notification of an aircraft accident or incident with a minimum of delay and by the most suitable and quickest means available to :

(*a*) The State of Registry ;

(*b*) The State of the Operator ;

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(*c*) The State of Design ;

(*d*) The State of Manufacture ; and

(*e*) The International Civil Aviation Organisation, when the aircraft involved is of a maximum mass of over 2,250 kg or is a turbojet-powered aeroplane.

(2) When the State of occurrence is not aware of a serious incident of an aircraft registered in Nigeria or operated by a Nigerian Operator, the Bureau as appropriate shall forward a notification of an incident to the State of Design, the State of Manufacture and State of Occurrence when the Bureau is a State of Occurrence.

(3) *Accidents or Serious incidents in the territory of the State of Registry, in a Non-Contracting State or outside the Territory of any State.*

Responsibility of the State of Registry.

When the State of Registry institutes the investigation of an accident or serious incident, that State shall forward a notification in accordance with regulations 10 paragraphs 3 and 4 with a minimum of delay and by the most suitable and quickest means available to :

(*a*) The State of the Operator ;

(*b*) The State of Design operated by ;

(*c*) The State of Manufacture ; and

(*d*) The International Civil Aviation Organisation, when the aircraft involved is of a maximum mass of over 2,250 kg or is a turbojet-powered aeroplane ;

Response on Notification.

(4) The Bureau shall acknowledge receipt of any notification of an accident or serious incident received from another State.

(5) Upon receipt of a notification, the Bureau shall upon request, provide the State conducting the investigation with any relevant information available regarding the flight crew and the aircraft involved in the accident or serious incident. The Bureau shall also inform the State conducting the investigation whether it intends to appoint an accredited representative and if such an accredited representative is appointed, the name and contact details; as well as the expected date of arrival if the accredited representative will be present at the investigation.

(6) Upon receipt of a notification, the Bureau shall within a minimum of delay and by the most suitable and quickest means available, as much as possible provide the State conducting the investigation with details of dangerous goods on board the aircraft.

Notification to the Bureau and Duty to furnish Information relating to Accidents or Incidents.

10.—(1) Where an accident or incident occurs in respect of which, by virtue of regulation 14(2), the Commissioner is required to carry out, or to cause an officer to carry out an investigation, the relevant person or any other person having knowledge of an accident or incident and, in the case of an aerodrome accident or an incident occurring on or adjacent to an aerodrome, the authority or Operator of the Airport shall forthwith give notice thereof, within twenty four hours, to the Bureau by the quickest means of communication available and, in the case of an accident occurring in or over Nigeria, shall also notify forthwith a police officer for the area where the accident occurred, of the accident and of the place where it occurred.

(2) In these Regulations, the expression "relevant person" means :

(*a*) in the case of an accident or serious incident occurring in or over Nigeria or occurring elsewhere to an aircraft registered in Nigeria, the Pilot-in-Command of the aircraft involved at the time of the accident or serious incident or, if he or she is fatally injured or incapacitated, the quality assurance/ safety personnel, Owner or the Operator of the aircraft ;

(*b*) Other crew members, if physically able at the time the report is submitted shall attach a statement setting forth the facts, conditions and circumstances relating to the accident or incident as they appear to him or her. If any of the crew members is incapacitated, he or she shall submit the statement as soon as he or she is physically able ; and

(*c*) in the case of a serious incident occurring in or over any country or territory other than a member State or a Contracting State to an aircraft registered elsewhere than in Nigeria but operated by an undertaking established in Nigeria, that undertaking ;

(*d*) In the event of any occurrence, the operator shall notify the Bureau via its accident/incident reporting form available on its website (www.aib.gov.ng) not later than 24 hours of the occurrence.

(3) The notification shall contain as much of the following information as is available but its dispatch shall not be delayed due to lack of complete information :

(*a*) in the case of an accident, the identifying abbreviation "ACCID" or, in the case of a serious incident, the identifying abbreviation "INCID" ;

(*b*) the manufacturer, model, nationality and registration marks and serial number of the aircraft ;

(*c*) the name of the owner, operator and hirer (if any) of the aircraft ;

(*d*) the qualification of the Pilot-in-Command of the aircraft and nationality of the crew and passengers ;

(*e*) the date (local or Co-ordinated Universal Time of the accident or serious incident ;

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(*f*) the last point of departure and the point of intended landing of the aircraft ;

(*g*) the position of the aircraft with reference to some easily defined geographical point and latitude and longitude ;

(*h*) the number of :

(*i*) crew on board the aircraft at the time of the accident or serious incident and, in the case of an accident, the number of them killed or seriously injured as a result of the accident ;

(*ii*) passengers on board the aircraft at the time of the accident or serious incident and, in the case of an accident, the number of them killed or seriously injured as a result of the accident ;

(*iii*) other persons killed or seriously injured as a result of the accident ;

(*i*) the nature of the accident or serious incident and the extent of the damage to the aircraft as far as is known ;

(*j*) an indication to what extent the investigation will be conducted or is proposed to be delegated by the State of Occurrence ;

(*k*) the physical characteristics of the accident or serious incident area as well as an indication of access difficulties or special requirements to reach the site ;

(*l*) the identification of the originating authority and means to contact the investigator in charge and the accident investigation authority of the State of Occurrence at any time ;

(*m*) Presence, description and location of dangerous goods on board the aircraft.

Language of Communication.

(4) Notification(s) by the Bureau or by any person or persons pursuant to regulations 10 sub-paragraphs (1-3) shall be in plain English language.

Additional Information.

(5)—(*a*) As soon as it is possible to do so, the Bureau shall dispatch the details omitted from notification as well as other known relevant information ;

(*b*) Where the facilities or services of any State of which have been, or would normally have been, used by an aircraft prior to an accident or incident and which has information pertinent to the investigation on request by the State of Occurrence by the Bureau shall provide such information on the activities which may have directly or indirectly influenced the operation of the aircraft ;

(*c*) When an aircraft involved in an accident or a serious incident occurred in another lands in Nigeria, the Bureau shall on request by the State of Occurrence, the Bureau shall furnish it with the flight recorders records and, if necessary, the associated flight recorders ;

(*d*) The Bureau shall provide on the request of the State of occurrence pertinent information on any organisation whose activities may have directly or indirectly influenced the operation of the aircraft ;

(*e*) Any organisation whose activities may have directly or indirectly influenced the operation of the aircraft shall provide on request by the Bureau, with all pertinent information related to the operation of the aircraft.

(6)—(1) Where an incident, other than a serious incident, takes place :

(*a*) in or over Nigeria ; or

(*b*) otherwise than in or over Nigeria to an aircraft registered in Nigeria; the Owner, Operator, Pilot-in-Command or hirer of the aircraft, if so required by notice given to such a person by the Commissioner, shall send to the Commissioner such information as is in his or her possession or control with respect to the incident in such form and at such times as may be specified in the notice.

2. The decision as to the extent of investigation shall be as stated in regulations 18.

Response on Notification.

(7)—(*a*) The State of Registry, the State of the Operator, the State of Design and the State of Manufacture shall acknowledge receipt of the notification of an accident or serious incident sent to it by the Bureau ;

(*b*) Upon receipt of the notification, the States of Registry, Operator, Design or Manufacture shall as soon as possible, provide the Bureau with any relevant information available to them regarding the aircraft and flight crew involved in the accident or serious incident. Each State shall also inform the Bureau whether it intends to appoint an accredited representative and if such an accredited representative is appointed, the name and contact details; as well as the travel date expected of arrival of the accredited representative to Nigeria ;

(*c*) When the Bureau State conducting an investigation of an accident to a Nigerian aircraft of a maximum mass of over 2,250 kg and specifically requests participation Nigeria, the Bureau shall appoint an Accredited Representative and this shall not preclude the State conducting the investigation from requesting the Bureau additional information if the State believes that useful contribution can be made to the investigation or may result in increased safety.

Removal of Damaged Aircraft, Custody and Preservation of Evidence.

11.—(1) Subject to paragraph (2) below and regulation 14 where an accident or a serious incident which results in the withdrawal from service of an aircraft occurs in or over Nigeria no person, other than an authorised person, shall have access to the aircraft involved and neither the aircraft nor its contents shall, except under the authority of the Commissioner, be removed or otherwise interfered with. Where it is necessary to move aircraft wreckage, mail or cargo, sketches, descriptive notes, and photographs shall be made, if possible,

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of the original positions and condition of the wreckage and any significant impact marks.

(2) The Bureau shall take all reasonable measures to protect the evidence and to maintain safe custody of the aircraft and its contents for such a period as may be necessary for the purposes of an investigation. Protection of evidence shall include the preservation, by photographic or other means of any evidence which might be removed, effaced, lost or destroyed. Safe custody shall include protection against further damage, access by unauthorised persons, pilfering and deterioration.

(3) Subject to the provisions of Customs and Excise Management Act—

(*a*) the aircraft may be removed or interfered with so far as may be necessary for the purpose of :

(*i*) extricating persons or animals ;

(*ii*) removing any mail, valuables or dangerous goods carried by the aircraft for the purpose of preservation ;

(*iii*) preventing destruction by fire or other cause ;

(*iv*) preventing any danger or obstruction to the public, air navigation or other transport ; or

(*v*) removing any other property from the aircraft under the supervision of an Investigator or with the agreement of an Investigator or of a Police Officer ;

(*b*) if an aircraft is wrecked on water, the aircraft or any of its contents may be removed to such extent as may be necessary for bringing it to a place of safety.

Request from States of Registry, the Operator, Design or Manufacture.

12. If a request is received from the State of Registry, the States of the Operator, Design or Manufacture that the aircraft, its contents, and any other evidence remain undisturbed pending investigation by an accredited representative of the requesting State, the Bureau shall take all necessary steps to comply with such request, so far as this is reasonably practicable and compatible with the proper conduct of the investigation, and shall observe the provisions of regulations 11 (2) and (3) above.

Release of Aircraft from Custody by State of Occurrence.

13.—(1) The Bureau shall release custody of the aircraft, its contents or any part(s) thereof as soon as they are no longer required in the investigation, to any authorised person or persons duly designated by the State of Registry or the State of the Operator, as may be applicable, and shall observe the provisions of regulations 11 paragraph 4. For this purpose, the Bureau shall facilitate access to the aircraft, its contents ; or any part thereof lying in an area within which it finds it impracticable to grant such access, otherwise, it shall itself effect removal to a point where access can be given.

(2) In these Regulations the expression "authorised person" means :

(a) any person authorised by the Commissioner either generally or specially to have access to any aircraft involved in an accident or serious incident ;

(*b*) any Police Officer ;

(*c*) any officer of Customs and Excise.

PART 4—INVESTIGATION

Investigators of Air Accidents.

14.—(1) For the purpose of carrying out investigations into accident and incidents to which these Regulations apply, the Commissioner shall, subject to paragraph (2) below, appoint persons as Investigators of Accidents, one of whom shall be appointed by the Commissioner as Investigator-In-Charge (IIC) ;

(2) Subject to paragraphs (5) and (6) below, the Commissioner shall carry out, or cause an Investigator to carry out, an investigation into :

(*a*) accidents or serious incidents which occur in or over Nigeria ;

(*b*) accidents and serious incidents which occur in or over any country or territory which is not an ICAO contracting State to aircraft registered in Nigeria when such an investigation is not carried out by another State ;

(*c*) accidents and serious incidents which occur in or over any country or territory which is not an ICAO contracting State to aircraft which are registered elsewhere than in Nigeria but which are operated by an undertaking established in Nigeria when such an investigation is not carried out by another State ;

(*d*) accidents and serious incidents which occur in or over any country or territory which is not an ICAO contracting State to aircraft which are registered elsewhere than in Nigeria, which does not intend to conduct an investigation in accordance with *Annex* 13, the State of Registry or, failing that, the Bureau as the State of the Operator, may institute an investigation in cooperation with such a State of Occurrence but failing such cooperation the Bureau shall itself conduct the investigation with such information as is available ; and

(*e*) accidents and serious incidents to aircraft registered in Nigeria when the location of the accident or serious incident cannot definitely be established as being in the territory of any State ;

(*f*) where an accident or serious incident occurs in international waters nearest to Nigeria, the Bureau shall provide such assistance as it is able and shall, likewise, respond to requests by the State of Registry.

(3) Subject to paragraphs (5) and (6) below, the Commissioner may, when he expects to draw air safety lessons from it, carry out, or cause an Investigator to carry out, an investigation into an incident, other than a serious incident, which occurs :

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(*a*) in or over Nigeria ; or

(*b*) otherwise than in or over Nigeria to an aircraft registered in Nigeria.

(4) The Commissioner may delegate the whole or part of an investigation into an accident or a serious incident to another Contracting State or a regional accident investigation agency by mutual arrangement and consent where the aircraft is of a maximum mass of over 2,250kg.

(5) Where the Commissioner delegates the whole or part of an investigation pursuant to paragraph (4) above, he shall so far as possible, facilitate inquiries by the investigator appointed by the relevant State.

(6) The Commissioner may carry out, or cause an Investigator to carry out, an investigation into an accident or incident where the investigation has been delegated to Nigeria by another State.

(7) Without prejudice to the power of an Investigator to seek advice or assistance as he may deem necessary in making an investigation, the Commissioner may appoint persons to assist an Investigator in a particular investigation and such persons shall for the purpose of so doing have such of the powers of an Investigator under these Regulations or as may be specified in their appointment.

(8) The Commissioner may arrange for any of his powers and obligations under these Regulations to be performed on his behalf by any officer of the Bureau designated by him.

Power to Develop and approve Policy and Procedures Manual.

15. The Commissioner in the exercise of his powers may develop and approve Policy and Procedures Manual (PPM) to implement the provisions and future amendments of ICAO *Annex* 13.

Powers of Investigators.

16.—(1) For the purpose of enabling the investigator to carry out an investigation into any accident or incident in the most efficient and effective manner within the shortest time, an investigator-in-charge shall have unrestricted control, where appropriate in cooperation with all competent authorities involved in the investigation, to :

(*a*) have free access to the site of the accident or incident as well as to the aircraft, its contents or its wreckage ;

(*b*) ensure an immediate listing, photographing or copying of evidence thereof and controlled removal of debris, or components for examination or analysis purposes or preparing a study for the purpose of prevention of accidents ;

(*c*) have immediate unhampered access to and control over all relevant materials, including the detailed examination and use of the flight recorders, Air Traffic Services and any other recordings without delay and shall not be

impeded by authorised personnel participating in the investigation or administrative or judicial investigations or proceedings ;

(*d*) ensure the detailed examination and effective use of the contents of the flight recorders, Air Traffic Services and any other recordings in the investigation of an accident or an incident and shall arrange for the read-out of the flight recorders without delay ;

(*e*)—(*i*) arrange expeditious conduct of investigation into a fatal accident and complete autopsy examination of fatally injured flight crew and subject to particular circumstances, of fatally injured passengers, and cabin attendants preferably by a pathologist experienced in accident investigation ;

(*ii*) arrange for medical examination of the crew member(s), passengers and the aviation personnel involved in the accident preferably by a physician experienced in accident investigation where the investigator believes on reasonable grounds that the information derived from the examination is, or may be relevant to the conduct of the investigation. The notice of request shall be made in writing and signed by the IIC or his designate ;

(*f*)—(*i*) the investigator shall in pursuance of the above Regulations have access to the results of examination of the bodies of victims or of tests made on samples taken from the bodies of victims ;

(*ii*) shall have immediate access to the results of examinations of the people involved in the operation of the aircraft or of tests made on samples taken from such people ;

(*iii*) No person having been involved in the operation of the aircraft shall refuse or fail to produce information to an investigator, or to appear before an investigator and give statement or to provide information, to submit to a medical examination.

(*g*) examine and take statements from witnesses ;

(*h*) have free access to, or request from any State any relevant information or records held by the owner, the operator or the manufacturer of the aircraft and by the authorities responsible for civil aviation or airport operation ;

(*i*) enter into agreements to provide for the coordination of the activities between the Bureau and the relevant authorities noted in regulations 16 (1) above ; and

(2) For the purpose of paragraph (1) above, the investigator shall have the following unrestricted power :

(*a*) to invite and take such positive steps to call before him, to examine from all such persons as he thinks fit, to require such persons to answer any question or furnish any information or produce books, papers, documents and articles

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(*b*) to take statements from all such persons as the Investigator may think fit and to require any such person to make and sign a declaration of the truth of the statement made by such declarant ;

(*c*) on production, if required of his credentials, to enter and inspect any place, building or aircraft, where it appears to the Investigator to be necessary for the purposes of the investigation ;

(*d*) on production, if required of his or her credentials, to remove, test, take measures for the preservation of or otherwise deal with any aircraft other than an aircraft involved in the accident or incident where it appears to the Investigator requisite for the purposes of the investigation, and

(*e*) to take such measures for the preservation of any evidence as the investigator considers appropriate ;

(*f*)—(*i*) where the circumstances so require, particularly in cases where a witness becomes hostile or stubborn, the Investigator shall cause a summons to be issued under the hand of a competent legal Officer to secure the attendance of such a witness(s) ;

(*ii*) in cases where a party refuses access to or does not provide necessary information when required or impedes investigation, affirmations of findings may be made on the basis of the facts available ;

(*iii*) when it is determined that any person or party has supplied false information, the information shall be disregarded and use may be made of the facts available.

(3) Every person invited by an Investigator under paragraph (2)(*a*) above shall be entitled to reimbursement on such reasonable expense(s) as the Commissioner may determine.

(4) When requested to do so by the investigating body or entity of another member State, the Commissioner may provide assistance to that body or entity by supplying :

(*a*) installations, facilities and equipment for :

(*i*) the technical investigation of wreckage and aircraft equipment and other objects relevant to the investigation ;

(*ii*) the evaluation of information from flight recorders, Air Traffic Services recorder and the computer storage and evaluation of air accident data ; and

(*b*) accident investigation experts to undertake specific tasks but only when an investigation is opened following a major accident.

Flight Recorders.

17.—(1) The Bureau shall pursuant to regulations 16 sub paragraph 1 (*c*) above make effective use of flight recorders in the investigation of an accident or serious incident and shall arrange for the read-out of the flight recorders without delay ;

(2) Where the Bureau does not have adequate facilities to read out the flight recorders, recorders, it shall use the facilities made available to it by other States, giving consideration to the following :

(*a*) the capabilities of the read-out facility ;

(*b*) the timeliness of the read-out ; and

(*c*) the location of the read-out facility.

Form and Conduct of Investigations.

18.—(1) The extent of investigations and the procedure to be followed in carrying out investigations required or authorised under these Regulations, shall be determined by the Commissioner taking account of the purpose and objective of the investigation as stated in regulation 7 of these Regulations and the lessons the Commissioner expects to draw from the accident or incident for the improvement of safety. There shall be provisions for the participation of States having suffered fatalities/serious injuries to its citizens.

(2) If the State of Registry is a non-Contracting State and does not intend to conduct investigation in accordance with *Annex* 13, the State of the Operator or, failing that, the State of Design or Manufacture shall institute and conduct investigation. Such State or the Bureau may delegate the whole or any part of the investigation to another State by mutual arrangement and consent.

Investigator's Report.

19.—(1) On completion of an investigation into an accident or incident, the Investigator- In-Charge shall and with a minimum of delay prepare a report of the investigation in a form appropriate to the type and seriousness of the accident or incident.

(2) If it appears to the Investigator- In-Charge that the investigation of any accident or incident :

(*a*) involving a collision between a civil aircraft and a military aircraft ; or

(*b*) occurring while a civil aircraft was on, or in the course of taking off from or landing on, an aerodrome controlled by any Approved Training Organisation(s) (ATO), or an aerodrome controlled by the military forces of any country has been completed but for the investigation of matters affecting the discipline or internal administration of any of those forces which are more appropriate for the investigation by some other person or body, the investigation may be treated for the purposes of paragraph (1) above as if it had been completed without such matters being investigated under these Regulations. In such a case the report of the investigation into the accident or incident shall state those matters to which the investigation has not extended by reason of this paragraph.

(3) The report of an investigation into an accident shall state the sole objective of the investigation as described in regulation 7 above and, where appropriate, contain safety recommendations.

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(4) The report of an investigation into an accident or incident shall :

(*a*) where appropriate, contain relevant safety recommendations ;

(*b*) protect the anonymity of the persons involved in the accident or incident ; and

(*c*) be circulated by the Commissioner to the parties likely to benefit from its findings with regards to safety.

(5) An investigator shall not be compelled to give evidence on issues that apportion blame or liability or to disclose technical information that could affect the outcome of its investigation.

(6) A safety recommendation shall in no case create a presumption of blame or liability for an accident or incident.

(7) The Commissioner shall forward a copy of the report prepared pursuant to paragraph (1) above through the Minister for onward transmission without delay to the President.

PART 5—REPORTS

Notice of the Bureau's Report and Representations thereon.

20.—(1) No report, which is required by these Regulations, to be published shall be so published if, in the Commissioner s opinion, it is likely to affect adversely the reputation of any person, until the Commissioner has :

(*a*) Where it appears to him to be practicable to do so, served a notice under these Regulations upon that person, or if that person is a deceased individual, upon the person who appears to the Commissioner, at the time he proposes to serve notice pursuant to this paragraph, to represent best the interest of the deceased in the matter ; and

(*b*) made such changes to the report as he thinks fit following due consideration of any representations which may be made to him in accordance with regulation 20 (3) below by or on behalf of the person served with such notice.

(2) The notice referred to in regulation 20 (1) (*a*) above, shall include particulars of any proposed analysis of facts and conclusions as to the cause or causes of the accident or incident which may affect the persons on whom or in respect of whom the notice is served.

(3) Any representations made pursuant to regulation 20 (1) (*b*) above, shall be in writing and shall, subject to paragraph (6) below, be served on the Commissioner within 60 days of service of the notice referred to in Regulation 20 (1) (*a*) above.

(4) A copy of the report submitted to the President through the Minister under regulation 19 (7) above shall be served by the Commissioner on any person who has been served with a notice pursuant to regulation 20 (1) above.

(5) It shall be unlawful for anyone or organisation to disclose, or permit to be disclosed, use, circulate, publish or give access to a draft report or any part thereof, or any document obtained during an investigation of an accident or incident or tender in any proceedings whatsoever any privileged information contained in any notice or report served on him pursuant to regulation 20(1) or (4) above or release to any other person without the prior consent in writing of the Commissioner duly obtained, unless the report has already been published.

(6) The Commissioner shall have power to extend the period of 60 days prescribed in regulation 20(3) above and this power shall be exercisable notwithstanding that the period has expired.

Publication of Information.

21.—(1) Subject to the provisions of regulations 19(4)(*b*) above and 29 below, the Commissioner may at any time publish, or cause to be published, information relating to an accident or incident whether or not such accident or incident is the subject of an investigation by the Bureau.

(2) The Bureau should release at least during the first year of the investigation, established factual information and indicate the progress of the investigation in a timely manner.

Publication of the Reports.

22.—(1)Subject to regulation 19 (1) above, the Commissioner shall cause the report of an investigation into an accident or incident, to be made public in the shortest time possible and in such manner as he thinks fit.

(2) The Commissioner in pursuance of regulations 19 (1) and 22 (1) above shall cause the Final Report to be made publicly available as soon as possible with a minimum of delay and if possible within twelve months on its investigation ; Provided the Final Report shall have been made available to :

(*i*) the relevant authorities ;

(*ii*) States having a direct interest in the accident or incident investigation or other organisation or persons who in the opinion of the Bureau have a direct interest and if applicable to ICAO where the accident or incident involves an aircraft of a maximum mass of over 5,700kg ;

(*iii*) the States of Registry, Operator, Design, and Manufacture ;

(*iv*) States having suffered fatalities or serious injuries to its citizens ;

(*v*) and other organisation or persons who in the opinion of the Bureau have a direct interest in the investigation ;

(*vi*) any State that provided relevant information, significant facilities or experts.

(3) A Report posted on the internet of the Bureau s website shall be deemed to be publicly available as the Final Report and hard-copy of the publication may not necessarily be required.

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(4) If the report cannot be made publicly available within twelve months, the Bureau shall make an Interim Statement publicly available on each anniversary of the occurrence, detailing the progress of the investigation and any safety issues raised.

Accessibility of the Bureau's Circulars, Guidance Materials.

23. The Bureau shall make available its establishing Act, Regulations, Policy and Procedures Manual, Directives, Orders, and other Guidance Materials available to the public by means of uploading such on its website.

Consultation.

24.—(1) The Bureau shall send a copy of the draft Final Report to the following States inviting their significant and substantiated comments on the Report as soon as possible :

(*a*) the State that instituted the investigation ;

(*b*) the State of Registry ;

(*c*) the State of the Operator ;

(*d*) the State of Design ;

(*e*) the State of Manufacture ; and

(*f*) any State that participated in the investigation as per the States of Occurrence.

(2) If the Bureau receives comments within sixty days of the date of transmittal letter, it shall either amend the draft Final Report to include the substance of the comments received as deemed appropriate or, if desired by the State that provided the comments, append the comments to the Final Report.

(3) The Bureau in pursuance of paragraph (1) above shall send a copy of the draft Final Report on the investigation through the State of the Operator, States of Design and Manufacture, to the organisations responsible for the type design and the final assembly of the aircraft to enable them submit comments on the report.

(4) If the Bureau receives no comments within sixty days of the date of the first transmittal letter, it shall issue the Final Report with a minimum of delay, and forward same to the President through the Minister, and publish unless an extension of that period has been agreed with the State or States concerned.

(5) If the Bureau receives no comments within the agreed extension period it shall issue the Final Report with a minimum of delay, and forward same to the President through the Minister, and publish.

Safety Recommendations and follow-up.

25.—(1) At any stage of an investigation carried out under these Regulations, the Commissioner shall, in a dated transmittal letter, where appropriate—

(*a*) make recommendation to the appropriate aviation authorities, including those in other States, of any preventive action(s) that the Investigator-in- Charge considers necessary to be taken promptly to enhance aviation safety ;

(*b*) address, as soon as possible, any safety recommendation arising out of the investigation to the accident investigation authorities of the States concerned and to ICAO ; and

(*c*) continually assess the effectiveness of its work by keeping records of the hazards discovered, safety Recommendations or notifications issued, the responses received and the numbers of hazards considered eliminated. The records shall provide a measure of the effectiveness of the prevention effort and assist the Bureau in the follow-up of those hazards for which no or an inadequate response was received in line with the ICAO Doc. 9422: Accident Prevention Manual and section 6.12 of ICAO *Annex* 13.

(2) An undertaking or authority to whom a safety recommendation has been addressed shall, without delay :

(*a*) take that recommendation into consideration and, where appropriate, act upon it ;

(*b*) send to the Commissioner :

(*i*) full details of the measures, if any, it has taken or proposes to take to implement the recommendation and, in a case where it proposes to implement measures, the timetable for securing that implementation ; or

(*ii*) a full explanation as to why no measures will be taken to implement the recommendation ; and

(*c*) give notice to the Commissioner if at any time any information provided to the Commissioner in pursuance of paragraph 2(*b*)(*i*) above concerning the measures it proposes to take or the timetable for securing their implementation is rendered inaccurate by any change of circumstances.

(3) Where any recommendation for preventive action or safety recommendation is forwarded to the Commissioner by another State, the Commissioner shall convey to that State within ninety days of the notification of the preventive action(s) taken or under consideration, or the reason why no action will be taken.

Reopening of Investigation.

26.—(1) The Commissioner shall cause the investigation of any accident or incident to be reopened, either generally or as to any part of the investigation, and shall do so :

(*a*) where new and significant evidence becomes available after the investigation has been closed ; or

(*b*) if for any other reason there is, in his opinion, ground for suspecting that the reputation of any person has been unfairly and adversely affected.

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(2) When the State, which conducted the investigation, did not institute it, the Commissioner shall first obtain the consent of that State which instituted the investigation.

(3) Any investigation reopened shall be subject to and conducted in accordance with the provisions of these Regulations.

(4) The Commissioner shall set up a five member ad-hoc committee to determine the investigations identified and issue terms of reference. The Committee shall deliberate and submit the Report within the shortest reasonable time as may be prescribed by the commissioner.

Accredited Representa-tives Rights and Privileges.

27.—(1) Where an investigation of an accident or serious incident is being carried out by an Investigator-in-Charge pursuant to regulation 14 above, the following States shall be entitled to appoint an accredited representative :

(*a*) the State of Registry ;

(*b*) the State of Design ;

(*c*) the State of Manufacture ;

(*d*) the State of the Operator ;

(*e*) a Contracting State which has, on request, furnished information, facilities or experts to the Commissioner in connection with the accident or incident may take part in the investigation.

(2) The accredited representative shall be permitted to visit the scene of the accident, examine the wreckage, obtain witness information, receive copies of all pertinent documents (saving all such just exceptions as may be determined by the Commissioner), have access to all relevant evidence as soon as possible, make submissions, participate in readouts of recorded media, participate in any off-scene investigative activities.

(3) An accredited representative appointed under these Regulations may be accompanied by such technical and other advisers as may be considered necessary by the authorities of the State by which he is appointed. The degree of participation of such advisers in the investigation shall be decided by the investigator-in-charge in consultation with the accredited representative.

(4) Notwithstanding the provision of regulations 26(1) above, the Commissioner shall, upon receipt of a request from a State which has a special interest in an accident by virtue of fatalities or serious injuries to its citizens, permit the State to appoint an Expert who shall have the following entitlements :

(*a*) Visit the scene of the accident ;

(*b*) Have access to the relevant factual information, which is approved for public release by the State conducting the investigation and information on the progress of the investigation ;

(*c*) Assist in the identification of victims ;

(*d*) May meet with surviving passengers who are citizens of the experts States ; and

(*e*) Receive a copy of the final report.

Obligations of Accredited Representatives and Advisers.

28.—(*a*) Accredited representatives and their advisers shall provide the Bureau with all relevant information available to them and shall not divulge information on the progress and the findings of the investigation without the express consent of the Bureau on whose behalf the investigation is conducted ;

(*b*) The advisers assisting accredited representatives shall be permitted under the accredited representatives supervision, to participate in the investigation to the extent necessary to enable the accredited representatives to make their participation effective.

Appointment of Accredited Representative, Adviser, Observer and Expert by the Commissioner.

29.—(1) The Commissioner may appoint a Nigerian accredited representative to participate in the investigation into an accident or incident which occurs in another State and one or more advisers to assist the accredited representative where :

(*a*) is the State of Registry, State of the Operator, State of Manufacture or State of Design of the aircraft involved in the accident or incident ; or

(*b*) has, at the request of the State conducting the investigation, provided information, facilities or experts to that State in connection with the investigation.

(2) The Commissioner may appoint an expert to participate in the investigation into an accident or incident which occurs in another State where the Bureau has a special interest in the accident or incident by virtue of fatalities or injuries to citizens of Nigeria.

(3) A representative of a State or an air accident investigation body from a State other than the States specified in regulation 27 (1) may, upon a request made and with written permission of the Commissioner in consultation with the investigator-in-charge, participate in an investigation as an observer.

Obstruction of Investigation.

30.—(1) No person shall obstruct or impede an investigator or any person acting under the authority of the Commissioner in the exercise of any powers or duties under these Regulations.

(2) No person shall, without reasonable cause, fail to comply with any summons of an investigator conducting an investigation.

(3) The onus of proving reasonable cause for failing to comply with the summons shall lie on the person relying on such cause.

(4) No person shall refuse to make available the body of the deceased person or other human remains involved in an accident for the performance of an autopsy or medical examination required in this regulation, and the autopsy

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(5)—(*i*) Investigators appointed under regulations 14 of this Regulation may apply for a court order from the competent authority to compel compliance with orders or directives issued under this regulation when necessary ;

(*ii*) In pursuance of the Regulations, the Bureau may have an understanding with the Nigerian Police Force or the Department of State Security Services for the purpose of facilitating an expeditious performance of accident investigation.

(6) Notwithstanding the provisions of paragraph 5(*i*) above, if in the course of investigation it becomes known, or any act of unlawful interference is discovered or suspected, the Investigator-in-Charge shall immediately initiate an action to ensure that the aviation security and appropriate authorities are informed.

Non Disclosure of Relevant Records.

31.—(1) Subject to paragraphs (2) (4) (5) and (6) below, the commissioner shall not make available to any person or relevant record within his possession for purposes other than accident or incident investigation.

(2) Nothing in the foregoing paragraph (1) above shall preclude the Commissioner from disclosing a relevant record to any person as hereunder contained :

(*a*) where that person is a party to or otherwise entitled to appear at judicial proceedings and the relevant court has ordered that the relevant record shall be made available to him or her for the purposes of those proceedings ; or

(*b*) in any other circumstances where the relevant court has ordered that the relevant record shall be made available to him or her for the purpose of those circumstances.

(3) In these Regulations :

"*judicial proceedings*" includes any proceedings before any court, tribunal or person having by law power to hear, receive and examine evidence on oath ;

"*relevant court*" in the case of judicial proceedings or an application for disclosure made in Nigeria means the Federal High Court ;

"*relevant record*" means any item in the possession, custody or power of the commissioner which is of a kind referred to below :

(*a*) all statements taken from persons by the Bureau in the course of their investigation ;

(*b*) records revealing the identity of persons who have given evidence in the context of the investigation ;

(*c*) information collected during the investigation which is of particular sensitive and personal nature, including information concerning the health of individuals ;

(*d*) materials subsequently produced during the course of the investigation such as notes, drafts, opinions written by the investigators, opinions expressed in the analysis of information, including flight recorders information ;

(*e*) information and evidence provided by investigators from other States in accordance with international Standards and Recommended Practices, where so requested by their investigation authority ;

(*f*) draft preliminary and Final Reports or Interim statements ;

(*g*) Cockpit voice and image recordings and their transcripts, as well as voice recordings inside air traffic control unit ;

(*h*) all communications between persons having been involved in the operation of the aircraft ;

(*i*) written or electronic recordings, and transcriptions of recordings from air traffic control units, including reports and results made for internal purposes ;

(*j*) covering letters for the transmission of safety recommendations from any investigating authority to the addressee, where so requested by the investigating authority issuing the recommendation ;

(*k*) Occurrence reports filed under mandatory/voluntary occurrence reporting.

Provided that the records under paragraph (*h*), (*i*), (*j*) and (*k*) may be used for purposes aimed at the improvement of aviation safety ;

(4) Subject to paragraph 6 below, no order shall be made under paragraph 2 above, unless the relevant court is satisfied that the interest of justice in the judicial proceedings or circumstances in question outweighs any adverse domestic and international impact the disclosure may have on the investigation into the accident or incident to which the record relates or any future accident or incident investigation undertaken in Nigeria.

(5) A relevant record or part thereof shall not be treated as having been made available contrary to paragraph (1) above , only when pertinent to the accident or incident in any case where that record or part is pertinent and included in the Final Report of the accident or incident, or to the appendices to the Final Report.

(6) The provisions of these Regulations shall be without prejudice to any rule of law which authorises or requires the withholding of any relevant record or part thereof on the ground that its disclosure would be injurious to the public interest, unless such record or part thereof is deemed necessary by the Commissioner for inclusion in the Final Report under regulation 22.

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Judicial Panel or Tribunal of Inquiry.

32.—(1) Where the President exercises his powers under the Tribunals of Inquiry Act and constitutes a Judicial Panel or Tribunal of Inquiry to inquire into the causes and circumstances of any air accidents in or over Nigeria, the investigations relating to the accident by the Commissioner may be suspended and the Commissioner and his investigators shall render such assistance within their powers to the Judicial Panel or Tribunal of Inquiry for the purpose of achieving the objectives for which the Panel or Tribunal is constituted.

(2) The Bureau while conducting the investigation shall recognise the need for coordination between the Investigator-in-Charge and the judicial authorities. Particular attention shall be given to evidence which requires prompt recording and analysis for the investigation to be successful, such as the examination and identification of victims and read-outs of flight recorders recordings.

(3) Any investigation conducted in accordance with the provisions of these regulations shall conform to Annex 13 and particularly regulation 7 above and shall be separate from any judicial or administrative proceeding to apportion blame or liability.

Preliminary Report.

33.—(1) When the aircraft involved in an accident is of a maximum mass of over 2,250 kg, the Bureau shall send the Preliminary Report to :

(*a*) the State of Registry or the State of Occurrence as appropriate ;

(*b*) the State of the Operator ;

(*c*) the State of Design ;

(*d*) the State of Manufacture ;

(*e*) any State that provided relevant information, significant facilities ; and

(*f*) the ICAO.

(2) When an aircraft, not covered by paragraph (1) above, is involved in an accident that is 2,250kg or less, and airworthiness or matters considered to be of interest to other States are involved, the Bureau shall forward the Preliminary Report to :

(*a*) the States of Registry, or the State of Occurrence, as appropriate ;

(*b*) the State of Operator, Design, Manufacture ; and

(*c*) any State that provided relevant information, significant facilities or experts.

(3)—(*a*) The Preliminary Report shall be submitted in English language to the appropriate State and the ICAO by facsimile, email, or airmail within thirty days of the date of the accident unless the accident/incident Data Report has been sent by that time ;

(*b*) when matters directly affecting safety are involved, it shall be sent as soon as the information is available and by the most suitable and quickest means available.

(4) When the aircraft involved is of a maximum mass of over 2,250 kg, the Bureau shall send, as soon as practicable, in these format : the Accident Data Report (ADREP) or European Coordination Centre for Aviation Incident Reporting Systems (ECCAIRS) to the ICAO after the investigation.

(5) The Bureau may upon request provide other States pertinent information additional to that made available in the Accident/ Incident Data Report.

(6) When the Bureau is conducting an investigation into an incident to an aircraft of a maximum mass of over 5,700 kg, the Bureau shall send, as soon as practicable, in these format: the Accident Data Report (ADREP) or European Coordination Centre for Aviation Incident Reporting Systems (ECCAIRS) to the ICAO after the investigation.

Accident Investigation Report Review Committee.

34.—(1)(*a*) Any person dissatisfied with the contents of an aircraft accident investigation report, may by petition in writing, appeal to the Minister for a review ;

(*b*) The Petitioner shall obtain the support and signatures of at least five other persons ;

(*c*) The petitioner s request shall conform to the objectives of the Bureau as stipulated in Regulation 7.

(2) The Minister, if satisfied that a prima facie case has been established, may refer the petition to an Accident Investigation Report Review Committee (hereafter referred to as "the Committee"), to be constituted by the Minister.

(3) The Committee shall be an ad-hoc, made up of a chairman and four members, who shall be persons of integrity and having specialised knowledge in aircraft accident investigation and related profession.

(4) The Committee shall review the accident investigation report and may adopt procedures which it deems fit, to resolve the issues raised by the petition.

(5) The Minister shall publish the report of the Committee within thirty days upon submission of same.

Procedures for Amendment of Regulations.

35.—(1) These Regulations shall be amended from time to time to conform to the Civil Aviation Act, the provisions of ICAO *Annex 13* and any amendment thereto.

(2) There shall be established for the Bureau a Regulations committee. The committee shall be an ad-hoc committee made up of not more than five members of staff of the Bureau appointed by the Commissioner and a representative of the Minister who shall serve as an Observer.

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(3) The Committee shall be responsible for :

(*a*) Monitoring amendments to the Standards and Recommended Practices contained in the Annexes to the Convention on International Civil Aviation ;

(*b*) Incorporating the amendments into these Regulations ;

(*c*) Consideration of proposals for amendment to these Regulations made by stakeholders and other members of the Public by way of meetings prior to adoption and incorporation ;

(*d*) Proposing on its motion, amendments to the Regulations ;

(*e*) Compliance with the ICAO SARPs and if not possible, notification of differences to ICAO.

(4)(*a*) The Committee shall send Notices of Proposed Amendments (NPA) to operators and other stakeholders and request their comments thereto within a period of 30 (thirty) days.

(*b*) Upon receipt of comments, the Committee may consider and incorporate same into the Regulations.

(*c*) The Committee shall keep a record of such comments and its deliberations thereon.

(5) *Submission of Proposal* :

(*a*) Any interested person may submit to the Regulations Committee, a proposal on the introduction, amendment or withdrawal of a Regulation or technical standard ;

(*b*) The proposal shall be in writing and shall ;

(*i*) state the name and address of the proposer ;

(*ii*) state the contents of the Regulation, technical standard or amendment proposed or specify the Regulation or technical standard which the proposer wishes to be withdrawn ;

(*iii*) explain the interests of the proposer ; and

(*iv*) contain any information, views or arguments supporting the proposal.

Repeal and Saving Provision.

36. This Civil Aviation (Investigation of Air Accidents and Incidents) Regulations hereby repeals the Civil Aviation (Accidents Investigation) Regulations, 2006. Any investigation commenced under those Regulations where, in the case of a field investigation has not been completed or, in the case of a formal investigation has not been the subject of a report submitted to the Minister, shall continue as if it had been commenced under these Regulations.

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SCHEDULE 1

EXAMPLES OF SERIOUS INCIDENTS

1. A near collision requiring an avoidance manoeuvre to avoid a collision or an unsafe situation or where an avoidance action would have been appropriate.

2. A controlled flight into terrain only marginally avoided.

3. An aborted take-off on a closed or engaged runway.

4. A take-off from a closed or engaged runway with marginal separation from an obstacle.

5. A landing or an attempted landing on a closed or engaged runway.

6. A gross failure to achieve predicted performance during take-off or initial climb.

7. Fire or smoke in the passenger compartment, in the cargo compartment or engine fire, even though such a fire was extinguished by the use of extinguishing agents.

8. An event requiring the emergency use of oxygen by the flight crew.

9. An aircraft structural failure or engine disintegration not classified as an accident.

10. Multiple malfunctions of one or more aircraft systems seriously affecting the operation of the aircraft.

11. Flight crew incapacitation during flight.

12. Fuel quantity requiring the declaration of an emergency by the pilot.

13. A take-off or landing incident such as undershooting, overrunning or running off the side of runways.

14. A system failure, weather phenomenon, an operation outside the approved flight envelope or other occurrence which could have caused difficulties controlling the aircraft.

15. A failure of more than one system in a redundancy system mandatory for flight guidance or navigation.

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SCHEDULE 2

ICAO Annex 13 – Aircraft Accident and Incident Investigation.

ICAO Document 9756 – Manual for Accident and Incident Investigation, Part 1 to 4.

ICAO Document 9859 (2013) ICAO Safety Management Manual, (3rd Edition).

ICAO Circular 298 – Training Guidelines for Aircraft Accident Investigators.

ICAO Document 9962 (2011) – Manual on Accident and Incident Investigation Policies and Procedures.

ICAO Document 8984 (2012) – Manual of Civil Aviation Medicine (Third Edition).

ICAO Document 9973 (2013) – Manual on Assistance to Aircraft Accident Victims and their Families.

ICAO Document 9998 (2013) – ICAO Policy on Assistance to Aircraft Accident Victims and their Families.

Model Aircraft Accident and Incident Investigation (AIG) Act First Edition – November, 2013.

Model Aircraft Accident and Incident Investigation (AIG) Regulations First Edition – Nov, 2013.

DATED the 25th day of February, 2016.

SEN. HADI SIRIKA
Honourable Minister of State-Aviation

APPENDIX C: AGREEMENTS AND MEMORANDA OF UNDERSTANDING (MOU) WITH OTHER ORGANIZATIONS

Note. Copies of MoUs and other agreements regarding assistance and cooperation between the Bureau and other organizations within Nigeria, such as judicial authorities (Corona, Police, etc), the NCAA, emergency response agencies (National Emergency Management Agency, Nigerian Airspace Management Agency, Federal Airports Authority of Nigeria, Federal Road Safety Commission, Nigerian Security and Civil Defence Corps, Nigerian Air Force, Nigerian Navy, Teaching Hospitals), Universities, etc., as well as between the Bureau and other States are kept by the Legal Adviser.

APPENDIX D: EXAMPLES OF SERIOUS INCIDENTS

(Reference to ICAO Annex 13, Attachment C)

Note.— The incidents listed are typical examples of incidents that are likely to be serious incidents. The list is not exhaustive and only serves as guidance to the definition of serious incident.

i. Near collisions requiring an avoidance manoeuvre to avoid a collision or an unsafe situation or when an avoidance action would have been appropriate.

ii. Controlled flight into terrain only marginally avoided.

iii. Aborted take-offs on a closed or engaged runway, on a taxiway[1] or unassigned runway. Take-offs from a closed or engaged runway, from a taxiway[1] or unassigned runway.

iv. Landings or attempted landings on a closed or engaged runway, on a taxiway[1] or unassigned runway. Gross failures to achieve predicted performance during take-off or initial climb.

v. Fires and smoke in the passenger compartment, in cargo compartments or engine fires, even though such fires were extinguished by the use of extinguishing agents.

vi. Events requiring the emergency use of oxygen by the flight crew.

vii. Aircraft structural failures or engine disintegrations, including uncontained turbine engine failures, not classified as an accident.

viii. Multiple malfunctions of one or more aircraft systems seriously affecting the operation of the aircraft.

ix. Flight crew incapacitation in flight.

x. Fuel quantity requiring the declaration of an emergency by the pilot.

xi. Runway incursions classified with severity A. The Manual on the Prevention of Runway Incursions (Doc 9870) contains information on the severity classifications.

xii. Take-off or landing incidents. Incidents such as under-shooting, overrunning or running off the side of runways.

xiii. System failures, weather phenomena, operations outside the approved flight envelope or other occurrences which could have caused difficulties controlling the aircraft.

xiv. Failures of more than one system in a redundancy system mandatory for flight guidance and navigation.

1. Excluding authorized operations by helicopters.

APPENDIX E: TEMPLATE LETTERS

ACCIDENT INVESTIGATION BUREAU
Private Mail Bag 016, Murtala Muhammed International Airport, Ikeja, Lagos, Nigeria.
Tel: +234-1-7430099 Hotlines: +234-8077090909, +234-8077090908.
Website: www.aib.gov.ng E-mail: commissioner@aib.gov.ng

[DATE]

[Operator]

[Address]

Dear Sir,

REQUEST FOR INFORMATION ON THE [OCCURRENCE TYPE] INVOLVING YOUR [AIRCRAFT TYPE] WITH NATIONALITY AND REGISTRATION MARKS [REG. NO.] WHICH OCCURRED AT [LOCATION] ON [DATE]

Accident Investigation Bureau (AIB) wishes to request for the following information:

a) manufacturer, model, nationality and registration marks, serial number of the aircraft	
b) qualification of the pilot-in-command, and nationality of crew and passengers	
c) last point of departure and point of intended landing of the aircraft	
d) number of crew	
e) number of passengers onboard the aircraft	
f) are dangerous goods carried on board the aircraft	
g) description of the dangerous goods (type/nature)	
h) identification, markings and packaging of the dangerous goods	
i) location(s) of the dangerous goods	
j) quantity of the dangerous goods	
k) Documentation of the dangerous goods	
l) Any other pertinent information	

Please accept the assurances of the highest regards of the Commissioner/CEO.

Engr. Mohammed H. I. Wali
Director of Engineering
For: Commissioner/CEO

Please forward acknowledgements of receipt of this letter to: commissioner@aib.gov.ng, cc: alfawals@aib.gov.ng, danrakadayyabu@aib.gov.ng

ACCIDENT INVESTIGATION BUREAU
Private Mail Bag 016, Murtala Muhammed International Airport, Ikeja, Lagos, Nigeria.
Tel: +234-1-7430099 Hotlines: +234-8077090909, +234-8077090908.
Website: www.aib.gov.ng E-mail: commissioner@aib.gov.ng

[DATE]

[Stakeholder]

[Address]

Dear Sir,

LETTER OF TRANSMITTAL

DRAFT FINAL REPORT ON THE [OCCURRENCE TYPE**] INVOLVING [**AIRCRAFT **TYPE] OWNED AND OPERATED BY [**OPERATOR'S **NAME] WITH NATIONALITY AND REGISTRATION MARKS [**REG, NO.**] WHICH OCCURRED [**LOCATION**] ON [**DATE**]**

Accident Investigation Bureau (AIB), Nigeria is hereby inviting the under listed stakeholders for their respective, significant and substantial comments on the captioned report in compliance with ICAO Annex 13, sub section 6.3.

The Bureau invites you to provide comments on the report within sixty (60) days from the date of this transmittal letter, to amend or to include substance of comments received in accordance with sub section 6.3 of ICAO Annex 13.

This transmittal letter requests you to kindly forward this draft report to the operator and the organization responsible for the type design and final assembly of the aircraft as applicable, for their comments.

This draft final report is confidential and should not be disclosed or shared to the public.

Please accept the assurances of the highest regards of the Commissioner/CEO.

Engr. Mohammed H. I. Wali

Director of Engineering

For: Commissioner/CEO

Please forward acknowledgements of receipt of this letter to: commissioner@aib.gov.ng, cc: alfawals@aib.gov.ng, danrakadayyabu@aib.gov.ng

APPENDIX F: WRECKAGE AND PARTS RELEASE FROM

ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

WRECKAGE AND PARTS RELEASE FORM
Occurrence Reference:

The Bureau is conducting an investigation into the following aviation safety matter:

Investigation Title and/or other description: (aircraft make, model, registration, date of occurrence, etc)

The items listed below are no longer required by the Bureau as part of its safety investigation.

Note. – It is strongly recommended that components be inspected by authorized personnel where it is intended for them to be returned to operational service.

Items details (description and condition)	Date returned

Signature: (IIC or Delegate) Name: (IIC or Delegate) Date:

Phone: Fax: Email:

Please return a signed copy of this form to the above person at the Accident Investigation Bureau.

Owner or agent acknowledgement

I accept custody of the listed items.

Owner or agent's name: Phone:

Signature of owner or agent: Date:

Form: AIB.01.20 Issue: 01 Revision: 0 Date: 26 Jul 2018 Page 1 of 1

APPENDIX G: LIST OF SAFETY INVESTIGATOR KIT

S/N	DESCRIPTION	QUANTITY	LOCATION	REMARKS
	GO-BAG			
1	Pilots Case or rucksack type equivalent			
2	Maglite torch with belt pouch			
3	Electronic calculator			
4	Compass			
5	6" Steel Rule			
6	12" Steel Rule			
7	Tape Measure at least 20m long			
8	Reflective photo scale			
9	Protractor set (geometry)			
10	Pens, pencils, eraser highlighter pens etc			
11	Dictaphone (solid state and allows you to save recordings to computer as .wav files)			
12	Magnifying glass 10x to 30x magnification			
13	Inspection mirror on extending handle			
14	A4 Graph Paper			
15	A4 Notepad			
16	Waterproof notebook			
17	A4 Weather writer clipboard			
18	Worldwide travel plug			
19	Accident Investigation (AI) Aide Memoire			
20	Small Hand disinfectant			
21	Surgical gloves			
22	Compact digital camera			
23	Mobile phone			
24	Solar Charger			
25	Spare batteries for above			
26	Spare memory cards			
27	Hi-Vis waistcoat			
28	Gerber/Leatherman multi-tool and belt pouch			
29	Folder with hardcopy of any relevant forms			
30	Memory stick containing soft copies of forms above			
31	Spare memory sticks			
	CAMERA GO-BAG			
32	Peli case			
33	HD Hard Drive or memory card video camera			
34	Digital SLR of choice with wide angle zoom			
35	Flash Gun			
36	Spare memory cards			
37	Compact Camera (same memory card as above if possible)			
38	GPS of choice			
39	Battery charger and spare batteries			
40	10x25 waterproof binoculars			
41	USB Card Reader			
42	Instructions booklets for all equipment			
43	Driver CD's supplied with equipment			
44	All leads supplied with camera's, USB, VGA etc			
45	Memory sticks for downloads			

S/N	DESCRIPTION	QUANTITY	LOCATION	REMARKS
	EVIDENCE COLLECTION			
46	Tamper proof evidence tags			
47	Variety of evidence bags			
48	Nylon bags for fuel contaminated evidence			
49	Specialist bags for electronic components			
50	Marker flags (3 colours) and stakes			
51	Photo flags (tent style)			
52	Marker paint (spray can)			
53	Welders crayon			
54	Disposable tweezers			
55	Disposable scalpels			
56	Oxygen tubing			
57	Disposable syringes			
58	Swab kit (large cotton bud in sterile tube)			
59	Disposable forceps			
60	Plastic petri dishes			
61	Selection of plastic and glass containers for fluid samples			
62	Double-sided tape for chip detector wipes			
63	Shell water capsules (water contaminated fuel)			
64	Paint bushes (selection)			
65	Plastic disposable pipettes			
66	Pre-printed evidence labels (A4 Avery labels)			
67	Toolkit with wrenches, screwdrivers and drills			
68	Multipurpose knife			
69	Inspection mirror			
70	Waterproof flashlight with spare batteries and bulbs			
71	Plastic bags (assorted) and plastic sheets			
72	Masking tape and duct tape			
73	Small magnet			
	GO-KIT GENERAL			
74	Multi-block extension lead			
75	Camera Tripod			
76	Camera Monopod			
77	12v DC to 240v AC converter			
78	High power spot lamp and charger			
79	USB Microscope			
80	North Arrow ground marker			
81	5m Ground marker			
82	Hazard Tape			
	REMOTE			
83	Sat Phone			
84	Solar battery charger			
85	Satellite broadband capability			
	SURVEY EQUIPMENT			
86	Large scale maps of the accident area			
87	Magnetic compass			
88	GPS receiver			
89	Laser surveying equipment			
90	Clinometers			
91	Navigational computer			

S/N	DESCRIPTION	QUANTITY	LOCATION	REMARKS
92	Protractor and dividers			
93	Reel of cord, 50 to 300m long			
	MISCELLANEOUS			
94	Model aircraft			
95	Heavy gloves			
96	Hard hats			
97	Cellular phone			
98	Walkie-talkie			
99	Notebook computer with internet and wireless capability			
100	**BIOLOGICAL HAZARD PERSONAL PROTECTIVE EQUIPMENT**			
101	Disposable latex gloves			
102	Latex gloves			
103	Work gloves			
104	Leather gloves			
105	Nitrile gloves			
106	Kevlar gloves			
107	Face masks (Disposable)			
108	Masks (Re-useable)			
109	Protective goggles (anti fogging)			
110	Protective suits			
111	Disposable shoe covers			
112	Protective boots			
113	Disinfection chemicals			
114	Biological hazard disposal bags			

APPENDIX H: GUIDELINES ON PERSONAL PROTECTIVE EQUIPMENT AGAINST BIOLOGICAL HAZARDS

The following provides general guidelines on the personal protective equipment to be used by accident investigators at the accident site. The protective equipment may also be required when performing off-site examinations and tests on wreckage parts.

Disposable latex gloves. Latex gloves should be durable even though they are to be worn under work gloves. All latex gloves should be properly disposed of prior to leaving the accident site.

Work gloves. Work gloves should be as durable as practical and provide the hand, wrist and forearm with puncture and abrasion protection. Leather, nitrile and kevlar gloves are commonly used. All three types should be disinfected or properly disposed of prior to leaving the accident site.

Face masks. Face masks should cover the nose and mouth. Masks come in disposable and reusable configurations and should be disinfected or properly disposed of prior to leaving the accident site.

Protective goggles. Protective goggles should enclose the eyes by sealing around the top, bottom and sides. Common safety glasses are not acceptable. Goggles should be fitted with one-way check valves or vents to prevent fogging and should be disinfected or properly disposed of prior to leaving the accident site.

Disposable protective suits. Protective suits should be durable and liquid-resistant and should fit properly. If possible, they should have elastic-type hoods and elastic pant cuffs. Duct tape can be used to alter the suits and to patch tears. Protective suits should be properly disposed of prior to leaving the accident site.

Disposable shoe covers and protective boots. Disposable shoe covers made of polyvinyl chloride (PVC) or butyl rubber are recommended. Leather, rubber or Gortex work boots are also acceptable. Disposable shoe covers and protective boots should be disinfected or properly disposed of prior to leaving the accident site.

Disinfection chemicals. Two chemical types are commonly used to disinfect personal protective equipment. Rubbing alcohol of 70 per cent strength is effective and is available in towelettes, as well as in large hand towels. The most effective disinfectant solution is a mixture of common household bleach and water, with one part bleach to ten parts of water. Never mix alcohol and bleach.

Biological hazard disposal bags. Biological hazard disposal bags must be used for disposal of contaminated personal protective equipment. The bags are red or orange and are labelled "Biological hazard". For transport, the disposed material should be double bagged.

APPENDIX I: ACCIDENT SITE HAZARD IDENTIFICATION AND RISK ASSESSMENT CHECKLIST

ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

ACCIDENT SITE HAZARD IDENTIFICATION AND RISK ASSESSMENT CHECKLIST

INVESTIGATION NUMBER	AIRCRAFT TYPE / REGISTRATION MARKS/ OPERATOR
DATE	ASSESSMENT PRODUCED BY

ITEMS TO BE CHECKED	DANGER EXISTS	NO DANGER	NOT KNOWN	REMARKS
THE WRECKAGE				
1. Danger of fire	☐	☐	☐	_____
2. Hot areas after fire	☐	☐	☐	_____
3. Flammable fuel	☐	☐	☐	_____
4. Other flammable liquids	☐	☐	☐	_____
5. Acid material	☐	☐	☐	_____
6. Dangerous goods	☐	☐	☐	_____
7. Risk of explosion	☐	☐	☐	_____
8. Ammunition or pyrotechnics	☐	☐	☐	_____
9. Risk of electric shock	☐	☐	☐	_____
10. Dangerous components	☐	☐	☐	_____
11. Toxic fumes	☐	☐	☐	_____
12. Sharp glass and/or metal	☐	☐	☐	_____
13. Sharp composite material	☐	☐	☐	_____
14. Risk of collapsing structures	☐	☐	☐	_____
15. Risk of falling material	☐	☐	☐	_____
16. Bio-hazard	☐	☐	☐	_____
17. Pressurized components	☐	☐	☐	_____
18. Electromagnetic radiation	☐	☐	☐	_____
19. Radioactive radiation	☐	☐	☐	_____
20.	☐	☐	☐	_____
21. Pressurized systems	☐	☐	☐	_____
22.	☐	☐	☐	_____
23. Compositeash	☐	☐	☐	_____
ENVIRONMENTAL RISKS				
24. Other traffic	☐	☐	☐	_____
25. Rain	☐	☐	☐	_____
26. Heat	☐	☐	☐	_____
27. Darkness or bad lighting	☐	☐	☐	_____
28. Slippery areas	☐	☐	☐	_____
29. Risk for the injury	☐	☐	☐	_____
30. Risk of falling	☐	☐	☐	_____
31.	☐	☐	☐	_____
32. Risk of drowning	☐	☐	☐	_____
33. Risk of violence	☐	☐	☐	_____
34. Dangerous wildlife	☐	☐	☐	_____

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ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

ACCIDENT SITE HAZARD IDENTIFICATION AND RISK ASSESSMENT CHECKLIST

OTHER FACTORS

35. Protective equipment insufficient	☐	☐	☐	____
36. Lack of resources☐	☐	☐	____	
37. Lacking of proper tools	☐	☐	☐	____
38. Rush and/or fatigue	☐	☐	☐	____
39. Lack of vaccinations	☐	☐	☐	____
40. Other danger_____	☐	☐	☐	____

RESULT OF RISK ASSESSMENT(Are the risksacceptable and actionsrequired)

_____

_____

_____

THIS DOCUMENT MUST BE FILED IN INVESTIGATION FOLDER

APPENDIX J: REPORTING FORM AND REPORTING CHECKLIST

1) ACCIDENT/ INCIDENT REPORT FORM

Murtala Muhammed International Airport. P.M.B. 016 Ikeja, Lagos. Nigeria.

24hrs Emergency Lines:
+234(0)8077090909, 8077090908
Fax:

Aircraft Accident / Incident Report Form

Part 1

Accident Investigation Bureau

ACCIDENT DETAILS

Occurrence: .....
Date: ..... Time: .....Local/UTC
(delete as approriate)
Location: .....
.....
Lat/Long or OS Grid (if not on airfield): .....
AIB File Reference:

Please fill in this form in **CAPITAL LETTERS** and **black ink** only. We will electronically scan and store the information you provide. Use the reverse of the form as a continuation sheet if necessary. Please complete as much information as possible.

Notes:	**1 AIRCRAFT** 1.1 AIRCRAFT DETAILS Registration: ..... Manufacturer: ..... Generic Name: ..... Type and Series: ..... Engine Model: ..... No of Engines: Build Year..... C of A Category: ..... C of A Issue Date: ..... 1.2 CHECKS Total airframe hours: ..... Last check type: ..... Date: ..... 1.3 MAINTENANCE DETAILS Company: ..... Address: ..... Tel: .... Fax: ..... Post Code: Email:
	2 OPERATOR DETAILS Company: ..... Address: ..... Tel: .... Fax: ..... Post Code: Email:
	3 COMPANY FLIGHT SAFETY OFFICER Name: ..... Company: ..... Address: .... Tel: .... Fax: ..... Post Code: Email:
Tick boxes as appropriate Delete local/UTC as appropriate	**4 FLIGHT** 6.1 FLIGHT DETAILS Purpose of flight: ☐Passenger ☐Cargo ☐ Non-Revenue ☐ Training Departure airfield: ..... Departure time: .....Local/UTC..... Planned destination: ..... 6.2 WEIGHTS AND LOADING DETAILS (attach Load Sheet if available) Basic: .....(kg) C of G: ..... Max take-off weight: .....(kg) Max landing weight: .....(kg) No of Crew: ..... Weight: .....(kg) No of Passengers: ..... Weight: .....(kg) Fuel type: Weight: (kg) Baggage/Freight: Weight: (kg)

FILE REFERENCE AIB Form 001 REG Date of event

Murtala Muhammed International
Airport. P.M.B. 016 Ikeja, Lagos.
Nigeria.

24hrs Emergency Lines:
+234(0)8077090909, 8077090908
Fax:

Aircraft Accident / Serious Incident Report Form

Accident Investigation Bureau

Part 1

	5 WEATHER Issue time: ..... Forecast | Actual Wind direction/Speed: ..... Visibility (km): ..... Weather: ..... Cloud: ..... Temperature/dewpoint: ..... TEMPO Information: ..... Light conditions: ☐ Day ☐ Twilight ☐ Night QNH: ..... Obtained from:
Tick appropriate boxes stating other if relevant	**6 AIRFIELD DETAILS (complete only if relevant)** Airfield name: ..... Runway used: ..... ICAO Designator: ..... Runway slope:..... Type of: ☐ Departure ☐ Approach LVPs in force: ☐ Yes ☐ No Navigation aids used: ..... Runway surface: ☐ Grass ☐ Asphalt ☐ Concrete ☐ Other Surface condition: ☐ Wet ☐ Damp ☐ Dry ☐ Contaminated ☐ Firm ☐ Soft
Delete as appropriate Define 'Other' if appropriate Enter valid until date Enter hours in hours and minutes	**7 FLIGHT CREW DETAILS** Commander | Co-Pilot Name(including title): ..... DOB: ..... Pilot flying: .....PF/PNF..... .....PF/PNF..... LICENCE: Type: ..... Number: ..... Issuing Authority: ..... Valid until: ..... MEDICAL: Class: ..... Valid until: ..... Limitations: ..... RATINGS: Instrument Rating: Valid until: ..... Valid until: ..... Type/Ratings: ..... Other: ..... RECENCY: Licence Prof Check: ..... Operator Prof Check: ..... Anual Line Check: ..... SEP/CRM: ..... Company Qualifications: ..... Hours: All types: ..... All types PIC: ..... On type: ..... On type PIC: ..... Last 90 days: ..... Last 28 days: ..... Last 24 hours: ..... DUTY: Start of Duty Period (UTC): ..... Lenght of Preceeding Rest Period: .....

FILE REFERENCE AIB Form 001 REG Date of event

Murtala Muhammed International Airport. P.M.B. 016 Ikeja, Lagos. Nigeria.

24hrs Emergency Lines:
+234(0)8077090909, 8077090908
Fax:

Aircraft Accident/ Serious Incident Report Form

Accident Investigation Bureau

Part 1

IMPORTANT Please enter numbers of all persons on board (including those not injured)	**8 INJURIES TO PERSONNEL** TOTAL PERSONS ON BOARD: ..... None | Minor | Serious Pilot in Command: ..... Second Pilot: ..... Cabin Crew: ..... Passengers: ..... Others:
Tick damage type	**9 SURVIVABILITY** 9.1 Damage to cockpit area: ☐ Severe ☐ Moderate ☐ Minor ☐ None Details (if relevant): .... 9.2 Damage to flight deck area: ☐ Severe ☐ Moderate ☐ Minor ☐ None Details (if relevant): ....
Tick damage type and define 'Other' if appropriate	9.3 Evacuation: Exit(s) used by crew: ☐ Normal Exit ☐ Slide ☐ Other ..... Exits used by pax: ☐ Normal Exit ☐ Slide ☐ Other ..... Which emergency services attended: ☐ Police ☐ Fire ☐ Ambulance ☐ Air Ambulance Other assistance provided by: ..... 9.4 Emergency Equipment: Details of any items which failed: .... 9.5 Additional Comments: ....
List all airplane/engine damage	**10 DAMAGE TO AIRCRAFT** ....
	11 DAMAGE TO OTHER PROPERTY ....

Murtala Muhammed International Airport. P.M.B. 016 Ikeja, Lagos. Nigeria.

24hrs Emergency Lines:
+234(0)8077090909, 8077090908
Fax:

Aircraft Accident / Serious Incident Report Form

Accident Investigation Bureau

Part 1

Thank you for completing Part 1 of this form, a copy of which will be sent to the AIB Safety Data Department for inclusion in their database.

In Part 2, you are asked to provide a sketch of the site and a narrative description of the accident. Any accompanying photograghs and or documents will be returned, at your request, once the investigation is complete.

If you do not want a copy of Part 2 to be sent to the NCAA please tick the box below.

Do not send a copy of Part 2 of the form to the NCAA ☐

FILE REFERENCE AIB Form 001 REG Date of event

Murtala Muhammed International Airport. P.M.B. 016 Ikeja, Lagos. Nigeria.

24hrs Emergency Lines:
+234(0)8077090909, 8077090908
Fax:

Aircraft Accident / Serious Incident Report Form

Accident Investigation Bureau

Part 2

Show North and site elevation (amsl). If accident occurred on an airfield for which there is no published information, please provide as much detail as possible. Any photograghs of the site and / or aircraft would greatly assist the investigation.	**14 SKETCH ACCIDENT SITE**

Murtala Muhammed International Airport. P.M.B. 016 Ikeja, Lagos. Nigeria.

24hrs Emergency Lines:
+234(0)8077090909, 8077090908
Fax:

Aircraft Accident / Serious Incident Report Form

Accident Investigation Bureau

Part 2

	15 NARRATIVE DESCRIPTION OF EVENTS ....
	16 YOUR ASSESSMENT OF THE CAUSE ....
	17 YOUR SIGNATURE Name: .... Signature: .... Status: .... Pilot in Command: ☐ Yes ☐ No Address: .... Tex: .... Fax: .... Post Code: Email:

6 of 6

FILE REFERENCE AIB Form 001 REG Date of event

2) REPORTING CHECKLIST

ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

REPORTING CHECKLIST			
Notification — accidents and serious incidents			
From	For	Send to	ICAO Annex 13 reference
State of Occurrence	International occurrences: all aircraft	State of Registry State of Operator State of Design State of manufacture ICAO (when aircraft over 2 250 kg or is a turbo-powered aeroplane)	4.1
State of Registry	Domestic and other occurrences	State of Operator State of Design State of manufacture ICAO (when aircraft over 2 250 kg or is a turbo-powered aeroplane)	4.8

Checklist: AIB.01.02 Issue: 01 Revision: 0 Date: 26 Jul 2018 Page 1 of 1

APPENDIX K: INITIAL ACTIONS AFTER NOTIFICATION CHECKLIST

ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

INTIAL ACTIONS AFTER NOTIFICATION CHECKLIST

INVESTIGATION NUMBER	AIRCRAFT TYPE / REGISTRATION MARKS/ OPERATOR
DATE	COMPLETED BY

Action	Time	Action started	Action completed
Notification received			
Contact accident site (police / chief of rescue)			
Guidance given to police/rescue - Secure the site including ground marks - Crew alcohol test - Drug test if needed - Avoid disturbing wreckage and ground marks - Do not remove bodies - Document all actions - Cover wreckage and pieces, marks from rain - Stop leaking fluids, collect examples in bottles - Start documenting (photos and videos)			
Contact Commissioner/CEO and other investigators			
Verbal decision to initiate preliminary investigation			
Form the team for on site investigation			
Departure to accident site - check protective and investigation equipment needed - travelling arrangements - accommodation			
Contact Air Rescue Coordination Center for more info			
If accident on sea, contact Maritime Rescue Center			
Information on DGR from the operator, ATC or rescue forces			
Request from ATC - Radio recordings - Telephone recordings - Radar data - Flight plan -			
Recordings - FDR and CVR - Military radar data if needed			
Contact airport and request - Document braking marks etc. on runway - Save all weather recordings			

AIB.01.05 Issue: 01 Revision: 0 Date: 14 Nov 2018 Page 1 of 2

ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

INTIAL ACTIONS AFTER NOTIFICATION CHECKLIST

Action	Time	Action started	Action completed
Contact operator or owner, request - Information of crew and passengers - DGR			
Inform CEO and PR-officer frequently			
Notifications - State of the operator - State of registry - State of manufacturer and design - ICAO if required - States of vitcims			
Official decision to invetigate - Investigation team formed - Document the decision - Distribution of the decision			
Produce distribution list with contact information to all relevant parties			

APPENDIX L: NOTIFICATION FORM

ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

Accident/ Incident Notification Form

Information required (ICAO Annex 13 paragraph 4.2)	
a) for accidents the identifying abbreviation ACCID, for serious incidents INCID	
b) manufacturer, model, nationality and registration marks, serial number of the aircraft	
c) name of owner, operator and hirer, if any, of the aircraft	
d) qualification of the pilot-in-command, and nationality of crew and passengers	
e) date and time (local time or UTC) of the accident or serious incident;	
f) last point of departure and point of intended landing of the aircraft	
g) position of the aircraft with reference to some easily defined geographical point, and latitude and longitude[1]	
h) number of crew and passengers; aboard, killed and seriously injured; others; killed and seriously injured;[2]	
i) description of the accident or serious incident and the extent of damage to the aircraft, so far as is known;	
j) an indication to what extent the investigation will be conducted or is proposed to be delegated by the State of Occurrence;	
k) physical characteristics of the accident or serious incident area, as well as an indication of access difficulties or special requirements to reach the site	
l) identification of the originating authority and means to contact the investigator-in-charge and the accident investigation authority of the State Occurrence at any time, and	
m) presence and description of dangerous goods carried on board the aircraft	

[1] It may be helpful to provide the elevation of the accident site, if it is known.
[2] It is useful to first provide the number of persons aboard (crew, passengers) and then the injuries they sustained

Checklist: AIB.01.03 Issue: 01 Revision: 0 Date: 26 Jul 2018 Page 1 of 1

APPENDIX M: INVESTIGATION EVENT CHACKLIST

ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

INVESTIGATION EVENT CHECKLIST

INVESTIGATION NUMBER	AIRCRAFT TYPE / REGISTRATION MARKS/ OPERATOR
DATE	COMPLETED BY

Status	Description
☐ Complete ☐ N/A	Make hotel and travel reservations
☐ Complete ☐ N/A	Complete initial notification form for the accident
☐ Complete ☐ N/A	Identify accident site terrain and climate
☐ Complete ☐ N/A	Identify on scene commander and phone number
☐ Complete ☐ N/A	Coordinate initial site security with local authorities
☐ Complete ☐ N/A	Coordinate toxicology and autopsy for the pilot
☐ Complete ☐ N/A	Coordinate time and place of media briefings
☐ Complete ☐ N/A	Secure weather, airport, aircraft, and pilot information
☐ Complete ☐ N/A	Print maps and get directions to the accident site
☐ Complete ☐ N/A	Identify insurance adjuster's name and phone number
☐ Complete ☐ N/A	Identify party members and coordinate an initial meeting
☐ Complete ☐ N/A	Identify key personnel and exchange contact information
☐ Complete ☐ N/A	Identify and coordinate special requirements for the investigation
☐ Complete ☐ N/A	Coordinate component recovery and hangar space
☐ Complete ☐ N/A	Request radar data and communication transcripts plus audio tapes
☐ Complete ☐ N/A	Request pilot briefing information, transcripts and audio tapes
☐ Complete ☐ N/A	Request witness names and statements from local authorities
☐ Complete ☐ N/A	Recover flight recorders
☐ Complete ☐ N/A	Request police and fire department reports, including photos
☐ Complete ☐ N/A	Locate and review pilot's log book and training records
☐ Complete ☐ N/A	Locate and review airframe, engine, and propeller logbooks
☐ Complete ☐ N/A	Establish an out-briefing date, time, and place
☐ Complete ☐ N/A	Photograph the site from a minimum of eight points
☐ Complete ☐ N/A	Document terrain, weather and vegetation at the site
☐ Complete ☐ N/A	Document position and altitude of major components
☐ Complete ☐ N/A	Document wreckage distribution and impact markings
☐ Complete ☐ N/A	Document airframe impact, fire and aerodynamic damage
☐ Complete ☐ N/A	Document propeller or turbine blade signatures
☐ Complete ☐ N/A	Document airframe, engine and propeller data plate information
☐ Complete ☐ N/A	Document flight control positions and establish continuity
☐ Complete ☐ N/A	Document lifting device positions and settings
☐ Complete ☐ N/A	Document engine control positions and establish continuity
☐ Complete ☐ N/A	Document pressurization system and settings
☐ Complete ☐ N/A	Document landing gear system positions and settings
☐ Complete ☐ N/A	Document flight instruments and avionics
☐ Complete ☐ N/A	Document switches and circuit breakers
☐ Complete ☐ N/A	Document engine instruments and systems instruments
☐ Complete ☐ N/A	Document warning lights and annunciator statuses
☐ Complete ☐ N/A	Document oxygen system and establish continuity
☐ Complete ☐ N/A	Document hydraulic system and establish continuity
☐ Complete ☐ N/A	Document fuel system and establish continuity
☐ Complete ☐ N/A	Document power-plant and accessory items
☐ Complete ☐ N/A	Interviews (crew, ops and maintenance personnel) and request written statements
☐ Complete ☐ N/A	Give the pilot or operator form 001 with instructions
☐ Complete ☐ N/A	Victim identification
☐ Complete ☐ N/A	Interviews of next of kin
☐ Complete ☐ N/A	Analysis of flight recorders data
☐ Complete ☐ N/A	Interviews (Meteorology)
☐ Complete ☐ N/A	Interviews (ATC and Airport)
☐ Complete ☐ N/A	Interviews (passengers)
☐ Complete ☐ N/A	Crashworthiness
☐ Complete ☐ N/A	Aircraft performamnce
☐ Complete ☐ N/A	Firefighting operations

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ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

INVESTIGATION EVENT CHECKLIST

Status	Description
☐ Complete ☐ N/A	Coordinate shipping of components for tear-down analysis
☐ Complete ☐ N/A	Wreckage reconstruction
☐ Complete ☐ N/A	Analysis and report of operations group
☐ Complete ☐ N/A	Analysis and report of medical/human factors group
☐ Complete ☐ N/A	Analysis and report of witness group
☐ Complete ☐ N/A	Analysis and report of flight recorders group
☐ Complete ☐ N/A	Analysis and report of meteorology group
☐ Complete ☐ N/A	Analysis and report of ATC and Airport group
☐ Complete ☐ N/A	Analysis and report of survivability group
☐ Complete ☐ N/A	Analysis and report of cabin safety group
☐ Complete ☐ N/A	Analysis and report of maintenance and records group
☐ Complete ☐ N/A	Analysis and report of system group
☐ Complete ☐ N/A	Analysis and report of structures group
☐ Complete ☐ N/A	Analysis and report of powerplants group
☐ Complete ☐ N/A	Analysis and report of ste survey group
☐ Complete ☐ N/A	Analysis and report of photo/video/drone group
☐ Complete ☐ N/A	Operations anlysis and findings
☐ Complete ☐ N/A	Technical analysis and findings
☐ Complete ☐ N/A	Collect data and field notes from all party members
☐ Complete ☐ N/A	Coordinate future meetings with party members
☐ Complete ☐ N/A	Complete party form including signatures
☐ Complete ☐ N/A	Report of the investigator-in-charge
☐ Complete ☐ N/A	Complete field notes prior to releasing the wreckage
☐ Complete ☐ N/A	Complete wreckage release form including signatures
☐ Complete ☐ N/A	Copy all information and distribute it to party members
☐ Complete ☐ N/A	Request reimbursement for travel, overtime, and expenditures
☐ Complete ☐ N/A	
☐ Complete ☐ N/A	
☐ Complete ☐ N/A	
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APPENDIX N: DOCUMENT AMMENDMENT FORM

ACCIDENT INVESTIGATION BUREAU

SAFETY HOUSE, MURTALA MUHAMMED INTERNATIONAL AIRPORT P.M.B. 016 IKEJA- LAGOS, NIGERIA

DOCUMENT AMENDMENT FORM

AMENDMENT ORIGINATOR USE			
Document Title:			
Section:	Page:	Paragraph:	Revision:
The Requested Change: ☐ *Additional information attached*			
Reason(s) for the Amendment: ☐ *Additional information attached*			
Originator Name & Sign.:			Date:

DOCUMENT APPROVAL OFFICE USE	
Officers Consulted Regarding the Amendment	Sign. & Date
Director of Human Resource	
Legal Adviser	
Head of Security and Safety	
Head of ICT	
Director of Engineering	
Director of Operations	
Commissioner/CEO	
Comments upon Review	
☐ DECLINED - Reason Provided	
☐ APPROVED	
Approval Authority Signature:	Date:
Change Incorporated in Revision Number:	Date:

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