Airworthiness Investigation Manual (AIM)

For The Department of National Defence and the Canadian Armed Forces (DND / CAF)

30 December 2014

Version 1
FOREWORD

1. The Airworthiness Program for the Department of National Defence and the Canadian Armed Forces (DND/CAF) was established by the Minister of National Defence (MND) on 18 September 1998. This program is designed to assist the MND in meeting national and international obligations for airworthiness management of military aviation as outlined in the Aeronautics Act. This legislation charges the MND with “regulation of aeronautics and supervision of all matters connected with aeronautics” for all military aeronautical products in Canada. This includes both the aeronautical products of DND/CAF operating on a worldwide basis as well as those of visiting forces while operating in Canada.

2. The aim of the DND/CAF Airworthiness Program is to ensure that an acceptable level of aviation safety is achieved and maintained for military aviation. In order to achieve this mandate, the DND/CAF Airworthiness Program established a management accountability framework, which consists of an Airworthiness Authority (AA), a Technical Airworthiness Authority (TAA), an Operational Airworthiness Authority (OAA) and an Airworthiness Investigative Authority (AIA), as well as two specialist advisors; the Aerospace Medical Authority (AMA) and the Flight Test Authority (FTA). Furthermore, the program tasks the AA, the TAA, the OAA and the AIA to establish airworthiness instruments, which may include regulations, for their areas of responsibility.

3. The objective of this Airworthiness Investigation Manual (AIM) is to delineate AIA policies. It also outlines the basis for AIA standards, procedures and instructions and details how the AIA interacts within DND/CAF and with persons, agencies, companies or authorities outside of DND/CAF. This Manual expands on Defence Administrative Orders and Directives (DAODs 2015-0 & 2015-1) and is designed to complement the A-GA-005-000/AG-001 (DND/CAF Airworthiness Program), the A-GA-135-001/AA-001 (Flight Safety Program for the Canadian Armed Forces) and the A-GA-135-002/AA-001 (Occurrence Investigation Techniques for the Canadian Armed Forces).

4. Enquiries or proposed amendments should be directed to Directorate Flight Safety 2 (DFS 2).
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CHAPTER 1 - DND/CAF AIRWORTHINESS PROGRAM

GENERAL

1. The *Aeronautics Act* governs aviation activities in Canada. This legislation applies to two federal ministers; the Minister of Transport and the Minister of National Defence (MND). The *Aeronautics Act* charges the respective Ministers with responsibility “for development and regulation of aeronautics and supervision of all matters connected with aeronautics” with the scope that applies to “all aeronautical products and other things in Canada, to all persons outside Canada who hold Canadian aviation documents and to all Canadian aircraft and passengers and crew members thereon outside Canada.” Further, the MND is charged with these responsibilities for “military personnel or a military aircraft, military aerodrome or military facility of Canada or a foreign state (while operating in Canada)”. In order to fulfill the MND’s obligations with respect to this responsibility, the Department of National Defence and the Canadian Armed Forces (DND/CAF) established an Airworthiness Program. The objective of this chapter is to briefly outline the DND/CAF Airworthiness Program.

BACKGROUND

2. Prior to the DND/CAF Airworthiness Program, an internal 1993 audit by the Chief of Review Services identified deficiencies that showed the need for the creation of a more structured DND/CAF Airworthiness Program. Some of the specific concerns were:

   a. the MND's national and international airworthiness obligations for military aviation were not being met;

   b. the MND had not delegated any of his airworthiness responsibilities;

   c. there was no airworthiness management accountability framework; and

   d. DND/CAF airworthiness rules and standards were not harmonized with Transport Canada (TC) and the manner in which civilian contractors, who were supporting CAF flying operations, could perform various airworthiness activities was unclear.

3. In response to these concerns, the MND directed that a structured DND/CAF Airworthiness Program be developed and the Concept Paper for a DND/CAF Airworthiness Program was approved on 16 September 1998.

DND/CAF AIRWORTHINESS PROGRAM
4. The DND/CAF Airworthiness Program is based upon airworthiness management concepts used worldwide by military and civil airworthiness authorities, while being tailored to meet the unique needs of the DND and the CAF. It is based on the fundamental principles that airworthiness-related activities are completed to accepted standards, performed by authorized individuals, accomplished within accredited organizations, and done using approved procedures.

5. The objective of the DND/CAF Airworthiness Program is to achieve and maintain an acceptable level of safety for military aviation.

6. The concepts that govern the DND/CAF Airworthiness Program are that it must:
   a. document formally and control assignment of authority, including the associated responsibilities and accountabilities;
   b. establish independence between the Regulator (the individual responsible for making the rules) and the Implementer (the individual who conducts the activity);
   c. control the design, manufacture, maintenance, materiel support and operational usage of aeronautical products;
   d. ensure the airworthiness of an aeronautical product prior to its service use;
   e. maintain, once established, the initial state of airworthiness of an aeronautical product throughout its entire operational service use;
   f. conduct all airworthiness-related activities involving aeronautical products within an effective quality system framework; and
   g. achieve the applicable objectives of the Aeronautics Act.

AIRWORTHINESS PROGRAM ROLES

7. Within the CAF, the operational staffs are responsible for flying operations, aerospace control and operator training and qualification. Similarly, the technical staffs are responsible for the design, manufacture, maintenance and materiel support of aeronautical products, as well as for the training and qualification of technical personnel. To accommodate these responsibilities, the Airworthiness Program elements have been split into operational and technical areas. This division of responsibility has given rise to the Operational and Technical Airworthiness Programs. The Airworthiness Investigative Program has been added to monitor the Airworthiness Program and to investigate aviation safety-related issues and occurrences.
8. There are three distinct roles present in the Airworthiness Program. They are Regulator, Implementer and Investigator:

   a. the Regulator develops airworthiness instruments for design, manufacture, maintenance, material support and operation of aeronautical products and ensures their compliance;

   b. the Implementer conducts the activities for the associated aeronautical products as directed by the regulator. This role is assumed by the organizations, employees, and members of the DND/CAF as they conduct airworthiness related tasks; and

   c. the Investigator ensures that airworthiness related safety occurrences and safety issues are investigated “independently” of the Regulator and Implementer.

**OVERVIEW OF PROGRAM AUTHORITIES**

9. The DND/CAF Airworthiness Program established a management accountability framework of four Airworthiness Authorities, with clear delegation of authority from the MND to the specified positions in DND/CAF. The MND directed the CDS (in 2005) to delegate to these Authorities, under section 4.3(1) of the *Aeronautics Act*, the powers, duties and functions necessary for the Airworthiness Program. Further assignment of the authorities permits the application of the Airworthiness concepts and principles to be utilized at the lowest possible levels in the Department and supporting organizations. The tasks that are to be performed by the specific airworthiness authorities are outlined in individual CDS (delegation) Orders. The four Authorities are:

   a. the Airworthiness Authority (AA);

   b. the Technical Airworthiness Authority (TAA), regulator;

   c. the Operational Airworthiness Authority (OAA), regulator; and

   d. the Airworthiness Investigative Authority (AIA), investigator.

10. The AA has the authority to approve airworthiness-related policy and is responsible for the development, promotion, supervision and management of the DND/CAF Airworthiness Program. The Chief of the Air Force Staff (C Air Force), who is also the Commander Royal Canadian Air Force (RCAF), is normally the AA. Significantly, for the investigative portion of the program, the AA must ensure “that the Airworthiness Investigative Authority is not impeded in any way in the investigation of matters concerning aviation safety conducted under paragraph 4.2(n) of the *Aeronautics Act*.”

11. The TAA is responsible for the regulation of the technical airworthiness aspects of the design, manufacture, maintenance and material support of
aeronautical products and the determination of the airworthiness acceptability of those products prior to granting them Technical Airworthiness Clearance (TAC). The person holding the position of Director General Aerospace Equipment Program Management (DGAEP) or, in the event of the absence or incapacity of the Director General, the person holding the position of Director Technical Airworthiness and Engineering Support (DTAES), or in the event of the absence or incapacity of the Director General and the Director, the person holding the position of Director Aerospace Equipment Business Management is the TAA for DND and the CAF.

12. The OAA is responsible for the regulation of all flying operations. This includes responsibility for the regulation of operational procedures, flight standards, operator training, qualification and licensing, aerospace control operations and the determination of the airworthiness acceptability of aeronautical products prior to granting them Operational Airworthiness Clearance (OAC). The CDS has designated the officer holding the position of the Commander, 1 Canadian Air Division (1 Cdn Air Div) or, in the event of the absence or incapacity of the Commander or, if the position is vacant, the officer performing the duties and functions of the Deputy Commander Force Generation, as the OAA for DND and the CAF.

13. The AIA is responsible for the regulation of the airworthiness aspects of the Flight Safety (FS) Program. The AIA is also responsible for the independent investigation of airworthiness-related occurrences and for the monitoring of the DND/CAF Airworthiness Program to identify deficiencies. The CDS has designated the officer holding the position of Director Flight Safety (DFS) or, in the event of the absence or incapacity of DFS, or if the position is vacant, the officer performing the duties and functions of DFS, as the AIA for DND and the CAF.

14. In addition to the four airworthiness authorities that comprise the DND/CAF Airworthiness Program management accountability framework, there are two additional authorities associated with the program. These are the Flight Test Authority (FTA) and the Aerospace Medical Authority (AMA).

15. The C Air Force and Assistant Deputy Minister (Materiel) (ADM (Mat)) have designated the Commanding Officer Aerospace Engineering Test Establishment (AETE) as the CAF Flight Test Authority (FTA). Amongst other duties, the FTA is to assist the Airworthiness Authorities in their responsibilities within the airworthiness program and to ensure that Flight Test activities conducted in support of the program are conducted in a safe manner by qualified and authorized personnel. The flight testing conducted must ensure the FS concerns based on the intended operational usage of aeronautical products outlined in the Statement of Operational Intent (SOI) are properly addressed prior to operational flight evaluation.
16. The C Air Force and Chief of Military Personnel (CMP) have designated the person holding the position as Medical Adviser to the C Air Force, or the person performing this duty as the AMA who is also appointed the MND’s Medical Adviser for the purposes of section 6.5(1) of the \textit{Aeronautics Act}. This section of the \textit{Aeronautics Act} requires that the MND designate a contact point to receive personal medical information about persons involved with aeronautical activities or products and that might compromise safety by the nature of the medical condition. Separate from the MND’s Medical Adviser, the AMA has duties that involve a large number of airworthiness issues that have a medical nexus and the mandate of the AMA is to provide any required medical advice to the Airworthiness Authorities. One such duty is the responsibility to ensure the fitness of all aircrew who are either in direct control of CAF aircraft, or who are performing essential tasks onboard an aircraft.

17. A full description of the DND/CAF Airworthiness Program can be found in A-GA-005-000/AG-001, DND/CAF Airworthiness Program.

\textbf{AIRWORTHINESS INVESTIGATIVE AUTHORITY MANDATE}

18. The AIA mandate is outlined in a CDS Order, which is signed by the CDS upon direction of the MND. This Order designates as the AIA for the DND/CAF, the officer holding the position of DFS or in the event of the absence or incapacity of the Director or if the position is vacant, the officer performing the duties and functions of the Director. In addition, under subsection 4.3(1) of the \textit{Aeronautics Act}, this letter further delegates to the AIA, certain powers, duties and functions:

a. the power to convene a Board of Inquiry (BOI) under section 6.3 of the \textit{Aeronautics Act};

b. independently investigating matters concerning aviation safety under paragraph 4.2(n) of the \textit{Aeronautics Act} and informing the MND, through the Airworthiness Authority and the Chief of the Defence Staff, of any apparent, potential or real interference with the execution of the powers, duties or functions delegated to the AIA;

c. issuing airworthiness instructions and standards respecting the investigation of aviation-safety-related occurrences and issues that will satisfy the aviation safety requirements of the \textit{Aeronautics Act};

d. assigning investigative authority to organizations and individuals involved in the investigation of aviation-safety-related occurrences and issues;

e. taking immediate appropriate action if any circumstance, practice or procedure causes any doubt as to the airworthiness of a military aeronautical product;
f. monitoring airworthiness activities and functions to ensure they comply with established regulations, standards and orders to identify any deficiencies in the DND/CAF Airworthiness Program, and reporting them to the Airworthiness Authority;

g. conducting audits of processes and procedures with a view to recommending preventive measures (PM) to correct deficiencies if identified in the DND/CAF Airworthiness Program or if aviation safety is suspected of being compromised;

h. informing the MND, through the AA and CDS, of any significant airworthiness matter concerning military aviation;

i. preparing draft aeronautical regulations and orders relating to airworthiness investigative matters for submission to the Governor in Council and the MND, as appropriate; and

j. acting as the investigative member of the Airworthiness Review Board (ARB) and of the Airworthiness Advisory Board (AAB).

OBJECTIVE

19. The objective of this Airworthiness Investigation Manual (AIM) is to issue airworthiness policies, instructions and standards respecting the investigation of aviation-safety-related occurrences, airworthiness program monitoring functions and other issues that will satisfy the AIA’s roles in the Airworthiness Program and the investigation-associated safety requirements of the Aeronautics Act. It also outlines the AIA’s policies, procedures and means of compliance with applicable sections of the Canadian Transportation Accident Investigations Safety Board Act (CTAISB) Act.

APPLICABILITY

20. This document is produced by the AIA under the authority of the AA. As indicated in the A-GA-005, “new airworthiness instructions...are issued with a statement of applicability, means of compliance...and time. Compliance...shall be mandatory...unless an exemption or compliance extension (is issued).” As such, this publication is effective within 60 days of the date of publishing and any exemption or compliance extension must be applied for within that timeframe (see Chapter 5, paras 10 & 11).

AIRWORTHINESS AND FLIGHT SAFETY

21. It is important to understand the relationship between the DND/CAF Airworthiness Program and the FS Program. As stated in the A-GA-005, “the CAF Flight Safety Program performs the vital role of providing an independent review and assessment of the suitability and effectiveness of the Airworthiness Program, including its policies, standards and procedures.” As outlined in the
preceding paragraphs, one of the objectives of the Airworthiness Program is to establish and maintain an acceptable level of safety for military aviation, which is predicated on weighing the safety level desired against cost and operational capability of the various aircraft fleets. The acceptable level of safety varies for the fleet types and roles the aircraft assume because some safety levels for civilian aircraft types and roles are impractical for military operations. The As Low as Reasonably Practical Principle (ALARP) for risk is primary in the pursuit of these levels of safety; meaning risk reduction is pursued but must be weighed against financial and operational impacts of the implementation of initiatives.

22. The objective of the CAF FS Program is to prevent the accidental loss of aviation resources through a program of safe behaviour, promotion, education and the investigation and analysis of matters concerning safety. A comparison of the two programs reveals that the Investigative Authority’s portion of the DND/CAF Airworthiness Program closely matches the long-standing and very effective investigation and analysis segment of the FS Program. Consequently the investigation and associated segments of the CAF FS Program now form the Airworthiness Investigation Program.

23. In keeping with this concept, this manual and the A-GA-135 -001/AA-001 and A-GA-135-002/AA-001 (Flight Safety for the Canadian Armed Forces – Parts I & II) are designed to complement one another. The latter two documents outline the entire FS Program for the CAF whereas the AIM outlines the DND/CAF Airworthiness Program policy for the AIA’s investigation standards, authorities and processes.
CHAPTER 2 - AIRWORTHINESS INVESTIGATION PRINCIPLES

INTRODUCTION

1. The RCAF and the CAF have had an active and successful FS Program since 1942. Part of this program involved the investigation of aviation related occurrences. The investigation and associated segments of the FS Program form the Airworthiness Investigation Program. In order to achieve the same level of success, the Airworthiness Investigative Authority (AIA) employs many of the same principles that the FS Program embraces.

2. Of note and because the FS Program predates the Airworthiness Program, the terms for the AIA’s products and processes remains the same as those that exist in the FS Program. For example, accident reports remain Flight Safety Investigation Reports (FSIRs), even though they report the results of an Airworthiness Investigation.

3. The objective of this chapter is to outline the principles employed by the AIA in conducting investigations.

AIRWORTHINESS PRINCIPLES

4. The DND/CAF Airworthiness Program is based on the fundamental principles that airworthiness related activities are:
   a. completed to accepted standards;
   b. performed by authorized individuals;
   c. accomplished within accredited organizations; and
   d. done using approved procedures.

5. Airworthiness investigations comply with these principles with some minor deviation. In the case of airworthiness investigations, the powers that authorized individuals employ may be augmented for a specified time by certain AIA “retained” authorities depending on the circumstances associated with the investigation. The authority to conduct a Class II investigation or Enhanced Supplementary Report (ESR), as described in A-GA-135, is one example of such “retained” authority.

AIA PRINCIPLES

6. The objective of the DND/CAF Airworthiness Program is to establish and maintain an acceptable level of safety for military aviation. In order to accomplish this, airworthiness investigations are based on four principles:
a. airworthiness investigations are conducted independently from any influence of the Chain of Command (CoC);

b. airworthiness investigators must not assign blame;

c. the focus of airworthiness investigations is to develop effective, practical PMs that will preclude or reduce the risk of a reoccurrence; and

d. airworthiness investigations (through the AIA) make recommendations to the CoC for action but recommendations are not binding.

7. Independence from the Chain of Command. If Commanders were actively involved in investigations of occurrences in which the decisions or actions of the Commander may have been causal, it would be an obvious conflict of interest. In order to avoid this situation (or the perception of a conflict of interest), airworthiness investigators must be independent of any influence from the CoC. This independence is extremely important in order to maintain the credibility of the AIA organization. In support of this principle, the AA is charged (through the CDS Delegation Order) with the responsibility of ensuring that the AIA is not impeded in any way in the investigation of matters concerning aviation safety conducted under paragraph 4.2(n) of the Aeronautics Act; the AIA must inform “the Minister of National Defence, through the Airworthiness Authority and the Chief of the Defence Staff, of any apparent, potential or real interference with the execution of the powers, duties or functions.”

8. Non-Attribution of Blame. It is critical that airworthiness investigators receive honest, accurate and complete information from the individuals involved in an occurrence. It is only with this type of information that investigators can identify all the facts and determine all the circumstances that led to the occurrence. This can only be achieved in an organizational culture in which individuals can freely and openly admit their errors and omissions without fear of recrimination from the organization. This concept requires a commitment from the organization not to use airworthiness investigation information for legal, administrative or disciplinary purposes. In addition, it requires that airworthiness investigators ensure that their reports do not assign blame (or appear to assign blame) for the occurrence.

9. AIA Notification of Person-Centric Deviation to the Chain of Command. The Just Culture discussed in the A-GA-135-001/AG-001 accepts neither a punitive nor a blame-free culture. The non-attribution of blame in an AIA investigation should not be confused with a blame-free culture. The Just Culture cannot allow individuals to hide behind the veil of FS when a person-centric deviation has occurred – an act that is a reckless, negligent, intentional, or willful disregard of orders, regulations, or procedure. In this event, the element of reckless, negligent, intentional or willful disregard is not a matter for the AIA to
investigate, but rather the chain of command. As both the FS investigator and the AIA are obligated to respect the statutes set out in the Aeronautics, CTAISB, and Privacy Acts, this creates for them a dilemma of how to inform the chain of command of this aspect. Therefore, upon determination of a person-centric deviation, the FS investigator will immediately notify the AIA of this information. The sole responsibility to notify the chain of command rests with the AIA, who will do so by direct correspondence with the chain of command. Once notification to the appropriate command authority has been made by the AIA, the AIA’s obligations to uphold the Just Culture have been met. It then becomes incumbent on the chain of command to respond accordingly. A sample letter from the AIA to the chain of command is found in Annex A.

10. **Focus on Preventive Measures.** The primary focus of all airworthiness investigations will be to identify effective, practical PMs in a timely manner to the CoC. In order to do this, all PMs will be based on well-researched information and sound analysis. PMs must clearly articulate the problem, the expected action to rectify the problem and a proposed level of command (tactical, operational or strategic) to ensure that the proposed actions are completed. PMs are to be forwarded to the CoC (or via the DND/CAF sponsor to a civilian air operator) for consideration and action as soon as practical and need not wait for the formal publishing of reports. Consequently, safety actions can begin quickly as facts are revealed in the investigation, analysis is conducted and appropriate PMs become evident.

11. **Recommendations to the Chain of Command.** The aim of airworthiness investigations is to develop PMs. These PMs are then forwarded as recommendations to the CoC. As one of the basic building blocks of the Airworthiness Program the “AA requires that any reduction to the accepted level of safety must be fully documented and accepted in all situations where time permits the application of a formalized risk management process... the TAA and OAA are engaged fully in these processes.” (A-GA 005 Part 1, Section 1 para 15) However, the CoC is not obligated to accept these AIA investigation generated PM recommendations. Details regarding PM generation, associated analysis and management of PMs can be found in A-GA-135-001/AA-001 - Chapter 11 (Flight Safety for the Canadian Armed Forces); however, the principles associated with handling PMs follow below. Upon receipt of the recommendations of an airworthiness report, Commanders have options based upon the format of the recommended PM:

   a. they can accept the recommendation and direct the implementation of the proposed action;

   b. if the recommendation is supported but is beyond the purview of the local Commander, then the recommendation can be forwarded to the appropriate Commander (through the CoC) with the recommendation that it be implemented; or
c. the Commander can reject the recommendation and accept the risk of a similar occurrence happening in the future:

(1) should the PM be part of an Action Directive from the C Air Force (the end result from a completed FSIR) and because such a course of action implies a reduction in the accepted level of risk, a risk assessment must be undertaken to fully document the accepted level of risk,

(2) the Commander could partially accept the recommendations and implement the accepted portion of the recommendation. However, this also would require a risk assessment to document the mitigated level of risk for this situation. The risk assessment should include an explanation of the decision for the rejected part of the recommendation, or

(3) should the PM be the result of an investigation not involving an Action Directive (an SR, CR or ESR), documentation of the reasons and the assessment for not implementing the PM should be forwarded to the AIA and other levels in the FS chain. It will then be recorded in the Flight Safety Occurrence Management System (FSOMS).
ANNEX A – AIA LETTER OF NOTIFICATION OF PERSON-CENTRIC DEVIATION TO CHAIN OF COMMAND

1010-CH146XXX

29 February 2013

Distribution List

AIA NOTIFICATION OF PERSON-CENTRIC DEVIATION TO CHAIN OF COMMAND

References:
A. FSOMS XXXXX
B. A-GA-135-001/AG-001 Flight Safety for the Canadian Forces

1. On 21 Feb 13, I tasked a class I flight safety investigation to investigate the accident involving Bell 412 CF C-FYZX, Ref A. To date, the investigation has made significant progress to determine the cause of this accident and to identify preventive measures that will reduce the possibility of future recurrence.

2. The Investigator-in-Charge (IIC) of the investigation has informed me that there are elements of the accident that appear to be reckless, willful, or negligent. In my discussion with the IIC, I believe that these elements of the investigation meet the criteria of a person-centric deviation, outlined in Ref B, Chapter 10, and that they consequently fall outside my mandate as the Airworthiness Investigative Authority. As such, in accordance with Ref C, Chapter 2, this is my formal notification to you, the Commander 2 Canadian Air Division, so that these elements of the investigation may be more appropriately considered by you and your staff.

3. I recognize that you may consider this notification to be vague. However, the privilege that is accorded to the information that has allowed me to determine the extent of my airworthiness investigation, as safeguarded in both the Canadian Transportation Accident Investigation Safety Board and Privacy Acts, statutorily prohibits my communication to you of any further details. These statutes also compliment the limiting of information sharing that supports the decades of effort to establish and maintain a culture of free and open reporting. Nonetheless, this formal notification to you should represent the serious nature of the observed person-centric deviation.

Version 1 - 2A-1/2
4. Should you have any questions concerning this letter, I would be happy to discuss them with you in a manner that safeguards the integrity of the Canadian Armed Forces Flight Safety Program.

S. Charpentier
Colonel
Airworthiness Investigative Authority

Distribution List
Action
Comd 2 Cdn Air Div

Information
C Air Force
1 Cdn Air Div//Comd/FSO//
15 Wing//Comd/Cmdt 3 CFFTS//
CHAPTER 3 - INVESTIGATION CLASSIFICATION SYSTEM

BACKGROUND

1. The CAF FS Program encompasses detailed processes for reporting and investigating safety situations and the DND/CAF Airworthiness Program mandates the requirement to conduct investigations of matters related to aviation safety. Also, in an effort to identify hazards before they cause serious occurrences, the FS Program encourages all personnel associated with flying operations to report all situations that have the potential to cause a FS incident or accident. The purpose of investigating is to analyse the information derived from these investigations and to develop effective PMs to reduce the risk of reoccurrence.

REPORTING INFORMATION AND SECURITY

2. Reporting FS information is vital to the Flight Safety and Airworthiness Investigation Program. However, there will be times when Operational Security (OPSEC) and Operational/time sensitive information could have implications on active operations. In these cases, the method and security associated with reporting must be adjusted to counter the possible negative effects that public release of information or knowledge of an occurrence could impart on non-friendly forces. For example, it may not be appropriate to transfer information in an unsecure manner on an occurrence for an air asset that is actively engaged in operations in a forward area since the knowledge of this event could be advantageous to enemy operations. For such circumstances, reports must still be made as indicated within timelines outlined in the A-GA-135 but in a secure manner so as to preclude any advantages such knowledge might impart on these non-friendly forces.

REPORT TYPES

3. It is important that airworthiness investigation reports are completed by the appropriate AIA’s authorized individuals and forwarded in a timely manner. However, not all occurrences are investigated to the same degree due to a number of factors. Therefore, there are several types of airworthiness investigations, as well as various timelines by which the investigation reports are to be produced. Similarly, there is a hierarchy associated with the authorized individuals (investigators) that are assigned to complete the investigations and associated reports, based upon the individuals’ training, position, experience, certification and AIA delegated authority that must be matched with the investigation class and complexity (as outlined in Chapters 4, 5 & 6). A summary of the different types of airworthiness investigation reports and the time in which they would normally be completed follows.

4. Initial Reports (IR). IRs are required for all occurrences and should normally be submitted by the unit of occurrence within 12 hours of the
occurrence. These reports give the initial details noted around the situation and a brief description of the unsafe nature of the occurrence.

5. Supplementary Reports (SR). SRs are normally completed within 30 calendar days of the occurrence. SRs give details revealed from the investigation related to the cause of an occurrence, assign cause factors and recommend PMs. This is normally the conclusion of most occurrence investigations.

6. Combined Reports (CR). CRs are complete occurrence reports (IR and SR) in a single submission and format and are normally submitted within 48 hours. Usually this is for simple investigations where detailed investigation is not required or where the occurrence is one that has occurred before and the associated details are known.

7. Enhanced SR (ESR). An Enhanced SR will be used for occurrences that are sufficiently complex to warrant a more thorough investigation than a normal SR but do not require the same degree of scrutiny that is required for an FSIR, such as for a Class II investigation. The ESR format will generally follow the International Civil Aviation Organisation (ICAO) Annex 13 format. In compiling an ESR, a number of interim reports are prepared with various distribution protocols. These reports and their associated timelines are as follows:

   a. From the Investigator. The FTI summarizes the information in the Preliminary Report and is extracted from the “synopsis” section of that report. It is a high level perspective of the occurrence’s factual information, for consumption by DND/CAF, public, and media audiences, and is published in a bilingual format on the DFS website and in Flight Comment magazine. The FTI should be distributed within 30 days of the occurrence;

   b. ESR Draft for Comment. The ESR Draft for Comment is simultaneously distributed to all Persons (Parties) of Direct Interest (PDIS) for review and comment in order to confirm the accuracy and completeness of the draft report. The ESR Draft for Comment should be distributed to PDIS within seven months of the occurrence. Replies are returned directly to the AIA (DFS) to ensure privileged information is protected as required by the CTAISB Act;

   c. Final ESR. The Final ESR is the comprehensive bilingual report on the occurrence and is a refined version of the Draft for Comment Report that includes valid PDI inputs and should be distributed within 12 months of the occurrence. The AIA (DFS) is the tasking and release authority for the report. It is published on the DFS website; and
d. **Epilogue.** The Epilogue, which is extracted from the synopsis in the Final ESR, is a summary of the investigation written with a high level perspective consumption by DND/CAF, public, and media audiences. Similarly, it should be distributed in bilingual format within 12 months of the occurrence, concurrent with the Final ESR’s public release. It is published on the DFS website and in Flight Comment.

8. **Flight Safety Investigation Reports (FSIRs).** FSIRs are designed to provide a comprehensive report on a Class I occurrence, are usually produced by a team of investigators chosen for the particulars surrounding the occurrence, and generally follow the ICAO Annex 13 format. In compiling an FSIR, a number of interim reports are prepared with various distribution protocols. These reports and their associated timelines are as follows:

a. **Preliminary FSIR.** The Preliminary FSIR is distributed to the senior leadership and provides the initial factual information pertinent to the occurrence and makes recommendations for immediate PMs. It should be distributed within 30 days of the occurrence;

b. **From the Investigator.** The FTI summarizes the information in the Preliminary Report and is extracted from the “synopsis” section of that report. It is a high level perspective of the occurrence’s factual information, for consumption by DND/CAF, public, and media audiences, and is published in a bilingual format on the DFS website and in Flight Comment magazine. The FTI should be distributed within 30 days of the occurrence;

c. **FSIR Draft for Comment.** The FSIR Draft for Comment is simultaneously distributed to all PDIs for review and comment in order to confirm the accuracy and completeness of the draft report. The FSIR Draft for Comment should be distributed to PDIs within seven months of the occurrence. Replies are returned directly to the AIA (DFS) to ensure privileged information is protected as required by the CTAISB Act;

d. **Final FSIR.** The Final FSIR is the comprehensive bilingual report on the occurrence and is a refined version of the Draft for Comment Report that includes valid PDI inputs and should be distributed within 12 months of the occurrence. The AIA ( DFS) is the tasking and release authority for the report. It is published on the DFS website; and

e. **Epilogue.** The Epilogue, which is extracted from the synopsis in Final FSIR, is a summary of the investigation written with a high level perspective consumption by DND/CAF, public, and media audiences. Similarly, it should be distributed in bilingual format
within 12 months of the occurrence, concurrent with the Final FSIR’s public release. It is published on the DFS website and in Flight Comment.

9. It must be emphasized that the timelines outlined in the aforementioned paragraphs are planned target dates and may vary depending on the complexity of the investigation and investigator workload.

AIRWORTHINESS INVESTIGATIONS

10. There are two key factors that must be addressed when considering airworthiness investigations. The first factor is that investigations are focussed on developing effective and reasonable PMs though not all occurrences will yield them. The second factor is that the perceptions of all personnel involved in DND/CAF air operations are critical to the FS and the DND/CAF Airworthiness Programs. Timely and accurate reporting are basic tenets of both programs. Consequently the overall health of these programs will suffer if the perception is created that reporting is being ignored. Therefore, the investigation program must focus the system’s limited resources on those investigations that will yield effective PMs while ensuring that personnel continue to report all occurrences.

11. The objectives of conducting airworthiness investigations are to:

   a. focus valuable investigation resources on those occurrences that will identify useful, relevant and effective PMs;

   b. identify PMs as quickly as possible and advise the CoC of those PMs that require immediate attention;

   c. complete investigations efficiently and, wherever possible, in accordance with (IAW) the appropriate timelines; and

   d. continue to foster a reporting culture.

CONCEPT OF OPERATIONS

12. The practise of reporting all aircraft occurrences will continue as well as the policy of urging all personnel to report all incidents and hazards. All occurrences will continue to be entered into the FSOMS for critical trending and analysis purposes. However, not all aircraft occurrences will be investigated to the same degree so a means to determine the investigation level required must be initiated so that the appropriately qualified, certified and authorized individuals are assigned to the investigation. The first step to determine this is to classify the occurrence category based on:

   a. aircraft damage level (ADL); or
b. personnel casualty level (PCL) as determined by a medical officer IAW CFAO 24-1.

<table>
<thead>
<tr>
<th>AIRCRAFT DAMAGE LEVEL (ADL)</th>
<th>PERSONNEL CASUALTY LEVEL (PCL)</th>
<th>OCCURRENCE CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Destroyed or Missing</td>
<td>Fatal or Missing</td>
<td>A</td>
</tr>
<tr>
<td>Very serious damage</td>
<td>Very serious injury/illness</td>
<td>B</td>
</tr>
<tr>
<td>Serious damage</td>
<td>Serious injury/illness</td>
<td>C</td>
</tr>
<tr>
<td>Minor damage</td>
<td>Minor injury/illness</td>
<td>D</td>
</tr>
<tr>
<td>Nil</td>
<td>Nil</td>
<td>E</td>
</tr>
</tbody>
</table>

Table 1. Occurrence Category

13. Investigations will also be focused on selected occurrences that are deemed to provide the best potential for developing effective PMs. To accomplish this objective, the occurrence investigation classification system is utilized. Investigations are assigned to a classification based on three criteria:

a. the occurrence category;

b. the Safety of Flight Compromise Level (SFCL); and

c. other aggravating factors.

<table>
<thead>
<tr>
<th>SFCL</th>
<th>OTHER AGGRAVATING FACTORS</th>
<th>CLASS</th>
<th>AGENCY</th>
<th>REPORT TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extreme</td>
<td>Extreme</td>
<td>I</td>
<td>DFS</td>
<td>FSIR</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
<td>II</td>
<td>DFS</td>
<td>ESR</td>
</tr>
<tr>
<td>Medium</td>
<td>Medium</td>
<td>III</td>
<td>WFSO or UFSO</td>
<td>SR</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>IV</td>
<td>UFSO</td>
<td>SR or CR</td>
</tr>
</tbody>
</table>

Table 2. Flight Safety Investigation Classes

14. Table 2 is a guide only as AIA may determine the class of investigation into any category of occurrence. The AIA is the tasking authority for investigations requiring an FSIR or ESR. Considerations that the AIA will undertake are as follows:

a. Occurrence category: The occurrence category is based on the combination of the ADL and PCL per Table 1;
b. **Safety of Flight Compromise Level:** The SFCL indicates the actual level of risk experienced by the crew and/or aircraft during an occurrence or the potential SFCL if it was assessed as nil for the flight; and

c. **Other Aggravating Factors:** There are other factors that may elevate the level at which an occurrence is investigated. If a higher level of investigation might lead to a more effective reduction of risk to persons, property or the environment, then this level should be assigned. Consideration shall also be given to the maintenance of trust in the FS Program by CAF personnel and the general public.

15. Once an occurrence has been reported, unit and wing FS staffs will conduct an initial assessment as to determine the level of investigation. If the occurrence is categorized as either A, B or C, the matter shall be referred to DFS. For FS occurrences that do not meet these criteria, unit or wing FS personnel will conduct a preliminary evaluation using the SFCL and Aggravating Factors discriminators. If this assessment indicates that a higher level of investigation may be required, collaboration of FS staffs at all levels is required.
CHAPTER 4 - AIRWORTHINESS INVESTIGATIVE STANDARDS

BACKGROUND

1. One of the basic tenets of the DND/CAF Airworthiness Program is that airworthiness activities will be conducted by authorized individuals, to an accepted standard. As outlined in Chapter 1, one of the specific tasks assigned to the AIA is to issue airworthiness investigative standards respecting the investigation of aviation-safety-related occurrences and issues that will meet the aviation safety requirements of the Aeronautics Act. This chapter of the AIM outlines the AIA’s investigative standards.

CERTIFICATION AND AUTHORIZATION

2. In order for the AIA to authorize individuals to conduct the various activities associated with airworthiness investigations, the individuals must be certified as being qualified to conduct the activities. Often the certification follows the successful completion of the appropriate training that may include formal courses, informal field training under the supervision of qualified individuals and/or supervised completion of investigations and associated reports. In the case of some team specialists the certification of their qualification comes from DND/CAF training on a particular aircraft type or a qualification in a special area (arrestor gear or flight test for example). Once certified, individuals become “authorized” to conduct the airworthiness investigations through the AIA tasking message or through the duties associated with their FS positions as outlined in the FS Program (i.e. WFSO and UFSO).

SCOPE

3. The Airworthiness Program has made great effort to separate the responsibilities of the AIA, the TAA and the OAA; however, overlaps remain that are addressed by including appropriate procedures and direction within each authority’s detailed program documentation. Also, the establishment of formal agreements to manage the interface between the various authorities is encouraged. In the case of the AIA these agreements include Letters of Understanding, various Memoranda and Service Level Agreements between the AIA and the expert investigative support organizations (AETE, QETE, DRDC, NRC, the OAA and TAA, etc) that establish the specific roles and responsibilities of the relationships associated with airworthiness investigations. As well, the A-GA 135-001/AA-001 (Flight Safety for the Canadian Armed Forces) serves as a detailed procedures and protocol tool for the administration and management of investigation processes within the CoC and to a limited extent within the Airworthiness Program.

4. When the AIA becomes involved with investigations outside of the DND/CAF scope of activities, such as with Transportations Safety Board, other
Militaries (NATO, ASIC, etc) or other Airworthiness Authorities (NTSB (USA), AAIB (UK), etc) the interface is conducted through coordinated investigation protocols. Details on these instances are covered in Chapters 8 and 9 of this manual.

5. Within the DND/CAF Airworthiness Program, there is one “investigator” role and that is fulfilled by the AIA. While both the OAA and TAA staffs gather information, analyse it and make recommendations based on these processes, these activities are done for Operational or Technical Airworthiness assessment purposes and are not airworthiness investigations. For example, technical assessments deal with issues associated with the design, manufacture, maintenance or materiel support of an aeronautical product. Airworthiness investigations are usually conducted as the result of an occurrence and / or to investigate matters of safety involving both an operational and a technical nexus. This manual is concerned only with airworthiness investigations.

**GENERAL**

6. DND/CAF airworthiness investigations can be conducted by entities ranging from one person to large teams comprised of authorized accident investigators who are assisted by specialists. These specialists can include:

   a. operational specialists for the particular platform or system involved in the occurrence;

   b. technical specialists for the particular platform or system involved in the occurrence;

   c. medical experts, usually Flight Surgeon qualified;

   d. Human Factors (HF) specialists;

   e. escape system specialists;

   f. Aviation Life Support Equipment (ALSE) specialists;

   g. Cockpit Voice Recorder/Flight Data Recorder (CVR/FDR) or other recording medium specialists;

   h. engineering specialists provided by Quality Engineering Test Establishment (QETE);

   i. flight test specialists provided by Aerospace Engineering Test Establishment (AETE);

   j. other experts as required (such as aerodynamics or explosives experts); and
k. observers.

AIRWORTHINESS INVESTIGATORS

7. Airworthiness investigators receive special training on aircraft occurrence investigation. Proper occurrence investigation requires unique skills that must be developed through a combination of formal training and practical experience. The more complex an occurrence, the more developed the airworthiness investigator’s skill sets must be to successfully and efficiently complete the assigned tasks. However, the variation in complexity of aircraft occurrences makes it impractical to expect all investigators to have the same skills and therefore to implement a universal standard for investigators. Accordingly, a hierarchy of standards is utilized for airworthiness investigators, to meet the requirements imposed by the occurrence classification system outlined in Chapter 3 of this manual with the details on the management and training requirements of the various investigator levels being contained in Chapter 5.

8. Each occurrence to be investigated will have an assigned Investigator-In-Charge (IIC). The IICs may investigate by themselves or a team of specialists may support them. Regardless, the responsibilities of the IIC are as follows:

a. conducting, on behalf of the AIA, a thorough and efficient investigation of the occurrence (refer to Chapter 12 for details regarding investigation administration and ethos regarding this aspect);

b. leading and effectively managing assigned members of the investigation team. In the case of major investigations, this may include exercising operational control over the assigned members of the investigation team and various support elements, employing appropriate procedures, briefings and resource management, thereby allowing these various support elements to be successful and safe in completing their assigned tasks. Further, IICs must ensure appropriate reports and other support documents are produced by all elements in both the field and the post field phases;

c. effectively conducting site management, site safety, identifying evidence to be shipped for further investigation, liaising with recovery and salvage teams, ensuring awareness of any hazards that are associated with evidence are positively identified and shipped via an appropriate mode of transport (i.e. Transportation of Dangerous Goods);

d. gathering, preserving and cataloguing evidence along with supporting notes and logs so that investigations can be pursued by other investigators should transfer of the investigation responsibility be necessary. This may involve leading major recovery efforts in
remote areas or under austere conditions, detailed photo and film documentation, innovative survey, preservation and catalogue methods and/or any other state of the art investigation protocols;

e. identifying effective PMs as quickly as possible and recommending them to the AIA (for onward transmission to the Chain of Command) in a timely manner and keeping the AIA informed of daily progress through Situation Reports (SitRep);

f. dealing with Next of Kin (NOK), media and DND/CAF personnel as per AIA guidelines (Chapter 7);

g. ensuring that the resources expended on the investigation are justified and that the costs are captured and reported IAW the Financial Administration Act (FAA);

h. completing all required staff work as per AIA guidelines, including thorough, written reports IAW the published timelines; and,

i. effectively carrying out or managing any tasks associated with the investigation in the field and post field phase as required by the AIA.

9. The IIC may be assisted by a team of one or more trained accident investigator(s). Normally an accident investigator will receive formal training as determined by the AIA (DFS) before being authorized to participate in an occurrence investigation as a team member; however, the AIA reserves the authority to appoint any team members with or without formal training based upon extant circumstances.

AIRWORTHINESS INVESTIGATOR TRAINING

10. Airworthiness Investigator training will be accomplished through formal courses and, for some investigator classifications (IIC 2 & IIC 1), with field training.

11. Formal courses will consist of both in-service courses, such as the FS Course, as well as out-service courses conducted by accredited organizations and educational or other similar institutes (such as TSB (Canada), NTSB or FAA (USA), Cranfield University (UK), the Southern California Safety Institute (SCSI), Embry-Riddle Aeronautical University, etc). Due to the wide variation in out-service courses available, the AIA’s staff will usually develop a customized training package for investigators based on the current yet changing requirements within the AIA investigator staff.

12. Field training consists of following an On Job Training Syllabus (OJTS) that is accomplished through field investigation exposure and two other types of
formalized field training that will be conducted for training IIC 2s and IIC 1s. This formalized field training consists of shadow training and Acting-IIC training:

a. Shadow training is the first step in achieving specified qualifications. In this phase, the trainee monitors a qualified individual as they conduct an investigation from initial planning of the field portion of an investigation to submission of the final report. The IIC will submit comments on the Shadow Trainee performance to the DFS Senior Investigator (SI) for the training files. An example of these comments would include documentation of exposure to team safety briefs, site cordon procedures, donning of Hazmat kits, ejection seat examination procedures, witness interview observations, NOK contact, etc. A trainee normally completes the shadow phase of training prior to conducting the Acting-IIC phase; and

b. Acting-IIC training occurs when the trainee completes all IIC duties for the applicable classification of occurrence under the supervision of an appropriately qualified IIC. At the completion of the investigation, the supervising IIC submits a written progress report on the trainee to the SI. The SI will use these reports to form the basis for any recommendations for IIC advancement to the Chief Investigator, who will in turn assess progress and make recommendations for IIC certification, when merited, to the AIA.

AIRWORTHINESS INVESTIGATOR CATEGORIES

13. Air accident investigators are divided into two categories: Basic Investigator (BI) and IIC. These categories are subdivided into BI 2 and BI 1 and IIC 3, IIC 2 and IIC 1. The AIA is the issuing authority for all investigator categories although, through letters of delegation and for reasons of efficiency and span of control, some of this authority is delegated to various individuals (see Annex A for an example of an AIA Delegation of Authority Letter). Investigators are issued formal identification cards indicating their authorized categories. This may be accomplished through endorsements to an existing identification card as higher categories are obtained. Tables summarizing the roles and requirements of these categories are found at the end of this chapter.

14. Basic Investigator. The qualifications for the two sub-categories of BI are summarized in Table 3. All BI qualifications are valid for a period of five years from the date of issue of the qualification. However, this period can be extended if the individual has been continuously employed in a FS position (UFSO, UFS NCM, WFSO, WFS NCM, 1 Cdn Air Div FS Staff or DFS staff):

a. BI 2. A BI 2 is qualified to act as an airworthiness investigation team member of Class I to IV investigations and is qualified to conduct Class III & IV investigations. To qualify as a BI 2, the
individual must have successfully completed the Flight Safety Course (FSC). The FSC may be waived for a period of up to 12 months by the AIA. A BI 2 is typically required for a UFSO or a UFS NCM position. A BI 2 qualification is normally required for individuals assigned to Wing FSO, WFS NCM or 1 Cdn Air Div FS Staff positions and for individuals whose duties will entail regular membership on Airworthiness Investigation teams; and

b. BI 1. A BI 1 is qualified to act as an airworthiness investigation team member of Class I to IV investigations. To qualify as a BI 1, the individual must have successfully completed the FSC and a basic aviation safety investigator course at an accredited or like institution. The FSC can be waived for a period of up to 12 months by the AIA. A BI 1 qualification is normally required for individuals assigned to DFS as Airworthiness Investigators.

15. Investigator-In-Charge. There are three sub categories of IIC: IIC 3, IIC 2 and IIC 1. The qualifications for the categories of IICs are summarized in Table 4. All IIC qualifications are valid for a period of five years from initial certification. However, this period can be extended if the individual has been continuously employed in a flight safety position (WFSO, WFS NSM, 1 Cdn Air Div FS Staff or DFS staff). A brief description of each of these categories is as follows:

a. IIC 3. An IIC 3 is qualified, certified and authorized to act as the IIC for investigations up to the Class III level. Normally in order to qualify as an IIC 3, the incumbent must be BI 2 qualified. The FSC may be waived for a period of up to 12 months by the AIA. This will only be done in extenuating circumstances and only if the AIA is convinced through recommendation of the 1 Cdn Air Div FSO (Div FSO) that the individual concerned has sufficient experience to competently complete the tasks until formal training can be completed and that no other qualified IIC is available at the time of occurrence. An IIC 3 is normally a WFSO, WFS NCM or 1 Cdn Air Div FS desk officer and is authorized to release, review or amend reports on this level of investigations;

b. IIC 2. An IIC 2 is qualified and certified to act as the IIC for investigations up to the Class II level. To qualify as an IIC 2, normally the individual must be BI 1 qualified. The FSC may be waived for a period of up to 12 months by the AIA. In addition, an IIC 2 normally should complete OJTS IIC phase of field training but the AIA may waive this training if he/she is satisfied that the investigator has appropriate field experience. An IIC 2 is normally an individual assigned to DFS as an airworthiness investigator or the Div FSO as per the AIA delegation letter for that position; and
IIC 1. An IIC 1 is qualified and certified to act as the IIC for all airworthiness investigations. To qualify as an IIC 1, the individual should initially have an IIC 2 qualification. The FSC may be waived for a period of up to 12 months by the AIA. Normally the incumbent should have completed an advanced aircraft accident investigation course (or equivalent level specialty course). In addition, an IIC 1 should have completed the IIC OJTS; however, the AIA may waive the shadow and Acting-IIC field training if he/she is satisfied that the investigator has appropriate field experience. A person awarded an IIC 1 category is always an individual assigned to DFS as an airworthiness investigator.

INVESTIGATION TEAM SPECIALISTS

16. Investigation team member specialists often hold qualifications awarded by various professional organizations. It is not the intent of this manual to establish the standards of these professional organizations; however, the personnel that are assigned to fill a position as a member in a specialist capacity of an airworthiness investigation team are usually certified by the Commanding Officer, Head of Department, etc, of the applicable specialist organization as holding the appropriate qualifications. The objective of this section is to outline the general qualifications that must be held by an individual in order to participate in an aircraft occurrence investigation as an “authorized” investigation team specialist. The FS Investigation (FSI) tasking message is the vehicle that the AIA uses to “authorize” investigation team members to conduct airworthiness investigations for each occurrence.

17. Operations Specialists. Operations Specialists are included on airworthiness investigation teams to provide specialist knowledge with respect to the operation of the type of aircraft involved in the occurrence. These individuals are normally from the air operations MOSIDs. In order to act as an Operations Specialist, the individual should currently hold or have held (within the last 12 months, if possible) a qualification, as established by the applicable Standards and Evaluation Team, to operate the aircraft or one of its established crew positions. Ideally, this specialist should be a senior operator such as Formation Lead, Aircraft Captain, A-1 QFI, Instructor Pilot/ACSO/AEC, Standards Officer, Shift Supervisor, Wing Air Traffic Control Officer, etc. In addition, in order to enhance independence and credibility, all efforts must be made to find such specialists that are not directly or indirectly related to the occurrence unit. Although very beneficial, Operations Specialists do not need to have aircraft occurrence investigator training but it is crucial to the investigation that they possess a superior knowledge of their respective field of expertise.

18. Technical Specialists. Technical Specialists are included on airworthiness investigation teams to provide specialist knowledge with respect to the maintenance and/or engineering of the type of aircraft involved in the occurrence. These individuals are normally from the AERE or aircraft technician MOSIDs and
must typically have sufficient rank and staff experience to handle the investigation role and follow-on report writing responsibilities. For some fleets, due to the support and technical arrangements in existence, this individual may be a contractor employee. In order to qualify as a Technical Specialist, the individual must currently hold or have held (within the last 12 months) the appropriate technical qualification to the occurrence circumstances. Although it would be very beneficial, Technical Specialists do not need to have aircraft occurrence investigator training but it is crucial to the investigation that they possess a superior knowledge of their respective field of expertise.

19. Medical Experts. Normally, the investigating medical expert will be the DFS Flight Surgeon. Should the DFS Flight Surgeon not be available, a Flight Surgeon will be appointed from another unit after appropriate consultation with medical authorities. Flight Surgeons are included on airworthiness investigation teams to provide specialist medical knowledge, evaluate the physical, medical and physiological factors that may have had input into the occurrence, and be the team’s representative for medical processes such as autopsies and bodily fluids and tissue sampling. They will also be concerned with supplying expertise on survivability including crash dynamics-injury patterns and life support equipment, and the broad spectrum of human factors and human performance aspects of the investigation. As well, the Flight Surgeon is usually the primary contact for NOK interviews. Normally, investigating Flight Surgeons will have achieved post-graduate training in Aerospace Medicine and ideally will have achieved or will be working to achieve post-graduate training in public or occupational health or another health-related field.

20. Human Factors Specialists. The Human Factors Specialist (HFS) member of the investigation team explores and recommends solutions to the many human factors related problems in aviation. The HFS must have a strong working knowledge of the various realms of human factors science. At the site, the primary task of the HFS will be to collect and process all human factors information associated with the occurrence. The HFS can also act as a conduit between DFS and human factors researchers employed both in academia and in government, thus providing the CAF with the benefit of direct access to leading edge human factors research. An HFS should have their basic MOC training and achieved or are working towards achieving a Master’s Degree in Human Factors or a related discipline. These specialists must be certified by DRDC prior to becoming an “authorized” specialist airworthiness investigation team member.

21. Crew Systems Specialists. In order to qualify as a Crew Systems Specialist, the individual must have a combination of formal training and experience working with the restraint and ejection seat systems currently used by DND and the CAF. The Flight Test Authority (FTA) will establish these qualifications and beyond the specific crew systems training, will normally include FS training (Bl 2 qualification). These specialists must be certified by the FTA prior to becoming an AIA “authorized” specialist airworthiness investigation team member. Crew Systems Specialists are included in airworthiness investigations
to safety, inspect and confirm the crew systems equipment functioned as designed.

22. **Aviation Life Support Equipment (ALSE) Specialists.** An ALSE Specialist (ALSES) is included on airworthiness investigation teams to inspect ALSE following an occurrence to determine how well the equipment functioned and to suggest improvements, if deemed necessary. The ALSES must possess extensive knowledge and experience in working with ALSE equipment from both a design and evaluation perspective. The ALSES should have their basic MOSID training and extensive operational experience as an Aviation Technician (AVN Tech), preferably working with safety systems. These specialists must be certified by DRDC prior to becoming an AIA “authorized” specialist airworthiness investigation team member.

23. **Aeromedical Specialists.** Due to the operational intensity associated with many incidents or accidents, the DFS Flight Surgeon will, at times, require assistance from trained medical personnel to achieve his / her goals during an investigation. The CAF possesses such qualified personnel in the form of Aeromedical Technicians (AMT). An Aeromedical Technician Specialists (AMTS) is included on airworthiness investigation teams to assist the investigating Flight Surgeon when/as required. An AMTS should have their MOC basic training and extensive experience as an Aeromedical Technician. These specialists must be certified by DRDC prior to becoming an AIA “authorized” specialist airworthiness investigation team member.

24. **Cockpit Voice Recorder/Flight Data Recorder (CVR/FDR) Specialists.** In order to qualify as a CVR/FDR Specialist, the individual must have a combination of formal training and experience working with the CVR/FDRs currently used by DND and the CAF and any other medium employed for similar purposes. These qualifications will be established by the National Research Council (NRC) Flight Recorder Playback Centre (FRPC) Manager and will normally include BI 2/3 qualification. CVR/FDR Specialists must be certified by the NRC prior to acting as an AIA “authorized” specialist airworthiness investigation team member.

25. **Engineering Specialists.** In order to qualify as an Engineering Specialist, the individual must have a combination of formal training and experience in aircraft accident investigations, along with engineering training or other special training or skills to offer expert advice to airworthiness investigations. These qualifications will be established by the Superintendent of QETE and will normally include FS training (BI 2 qualification), specialist courses and other accident investigation training as determined by QETE. Further, an OJT program will be set up for new engineers so that experienced Engineering Specialists can mentor and monitor personnel as they become qualified. Engineering Specialists must be certified by the Superintendent of QETE prior to acting as an AIA “authorized” engineering specialist airworthiness investigation team member.
26. **Flight Test Specialists.** Flight Test Aircrew, Engineers or Technologists must be certified by the FTA in order to participate in an aircraft occurrence investigation as an AIA “authorized” Flight Test Specialist investigation team member.

27. **Other Experts (as required).** Sometimes due to the circumstances of an occurrence, special expertise is needed to properly investigate all aspects of the event. These personnel will be added to an investigation team as the circumstances dictate and are added to the team based on their special knowledge areas. Past examples include arrestor gear experts, aerodynamicists and explosive experts. These personnel will not likely have FS or accident investigation training.

**BRIEFINGS**

28. The IIC, or their designate shall provide briefings on the behaviours expected of investigation team members (information confidentiality, NOK contacts, releasing authority for information, etc) and the hazards and necessary protocols to mitigate them during the investigation (see Chapter 12, Annex A – IIC Checklist). These briefings must be conducted at the appropriate time, particularly for team members that are not FS qualified. During the investigation, similar briefings for all new team members should be part of the team joining protocols.

**OBSERVERS**

29. Under particular circumstances, observers may be appointed to airworthiness investigation teams. The three general sets of circumstances under which an individual will be granted observer status are listed as follows:

   a. an individual has been designated as an observer by a Minister of the Crown whose department has a direct interest in the investigation. This would normally only happen in the event of a civil-military occurrence;

   b. an individual is an accredited representative pursuant to an international agreement or convention (such as STANAG 3531, ASIC Air Standard 85/2A or ICAO Annex 13); and

   c. an individual is invited to attend as an observer if, in the opinion of the AIA, the person is likely to contribute to achieving the objective of the investigation. An example of this case would be a representative of the Original Equipment Manufacturer (OEM) of the aircraft or engine involved in the occurrence.

30. The AIA will determine the conditions and limitations placed on the activities of observers involved in an investigation by way of a formal letter granting observer status (Annex B), which the IIC should discuss in detail with
the observer. Notwithstanding any of these conditions, observers will not have the right to participate in the formal (recorded) interviews of witnesses and will not have the right to have access to privileged information. However, the IIC has the authority to allow an observer access to these information sources if in the opinion of the IIC such access would further the investigation and no other means to accomplish such furtherance are apparent. Observers will be required to sign the Observer Non-Disclosure Agreement (Annex C), stating that any information, privileged or otherwise, related to the on-going airworthiness investigation will not be discussed or disclosed to any person not assigned to the investigation without prior approval by the AIA. Failure to sign the non-disclosure agreement or unauthorized disclosure of information related to the on-going airworthiness investigation will result in the removal of observer status for the individual concerned.

<table>
<thead>
<tr>
<th>Investigator Category</th>
<th>Training Required</th>
<th>Duties</th>
<th>Valid Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Investigator 2</td>
<td>FSC</td>
<td>Investigation Team member for Class I to Class IV investigations</td>
<td>5 years from date of issue Extended if continuously employed in a FS position</td>
</tr>
<tr>
<td>Basic Investigator 1</td>
<td>As above plus Basic aviation investigator course</td>
<td>As above plus Commence upgrade for IIC of Class I &amp; II</td>
<td>5 years from date of issue Extended if continuously employed in a FS position</td>
</tr>
</tbody>
</table>

Table 3 - Basic Investigator Requirements and Duties
<table>
<thead>
<tr>
<th>IIC Category</th>
<th>Training Required</th>
<th>Experience Required</th>
<th>Duties</th>
<th>Valid Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIC 3</td>
<td>FSC</td>
<td>A/R</td>
<td>Act as IIC of Class III &amp; IV investigations at Wing/Unit</td>
<td>5 years from date of issue</td>
</tr>
<tr>
<td>IIC 2</td>
<td>As above plus Basic aviation safety investigator courses (as determined by AIA/DFS) DFS OJTS</td>
<td>Participated in 2 investigations as a BI1 Recommended by Senior and Chief Investigators</td>
<td>Act as IIC of a Class II, III or IV investigation</td>
<td>5 years from date of issue</td>
</tr>
<tr>
<td>IIC 1</td>
<td>As above plus IIC 2 qualified Advance aircraft investigation course (or equivalent) DFS OJTS</td>
<td>Participated in 2 Class I investigations Completed 2 Class II investigations as IIC Recommended by Senior and Chief Investigators</td>
<td>Act as IIC of a Class I, II, III or IV investigation</td>
<td>5 years from date of issue</td>
</tr>
</tbody>
</table>

Table 4 – Investigator-in-Charge Requirements and Duties
ANNEX A - AIA DELEGATION OF AUTHORITY LETTER – DIVISION FLIGHT SAFETY OFFICER

1150-21 (DFS 2) 1150-21 (DSV 2)
April 2014 Le avril 2014

Distribution List Liste de distribution

DELEGATION TO 1 CDN AIR DIV FSO OF AIA AUTHORITY FOR INVESTIGATOR CERTIFICATION DÉLÉGATION À L’OSV DE LA 1 DAC DE L’AEN POUR LA CERTIFICATION DES ENQUÊTEURS


1. IAW the authority delegated to the AIA in Ref A, the person holding the position of 1 Cdn Air Div FSO, in the event of the absence or incapacity of the 1 Cdn Air Div FSO or if the position is vacant, the officer performing the duties and functions of the 1 Cdn Air Div FSO is hereby authorized, IAW Ref B, on my behalf to:

a. Train Airworthiness (Flight Safety) Investigators to enable them to perform investigative duties;

b. Issue certificates for completion of Basic Investigator Level 2; and

c. Issue certificates and identification for Investigator-In-Charge Level 3 (IIC 3) to those Wing and Unit FSOs responsible for release of completed Class III and IV investigations and to personnel responsible for review of
these released investigations.

unités qui sont chargées de la publication des enquêtes de classes III et IV une fois celles-ci terminées, et pour le personnel chargé de l'examen de ces enquêtes publiées.

2. IAW Ref B, the 1 Cdn Air Div FSO is to keep records of all personnel certified as BI 2 and IIC 3. A copy of this list is to be provided annually to DFS 2-7 by 30 June.

2. Conformément à la réf b, l'OSV 1 DAC doit dresser la liste de tout le personnel qui a été certifié comme E 2 ou ED 3. Une copie de cette liste doit être fournie annuellement au DFS 2-7 au plus tard le 30 juin.

3. The 1 Cdn Air Div FSO is certified and authorized as an IIC 2.

3. L'OSV 1 DAC est certifié et autorisé à titre d'ED 2.

L’autorité chargée des enquêtes sur la navigabilité,

S. Charpentier
Colonel
Airworthiness Investigative Authority

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Version 1 - 4A-2/2
ANNEX B – AIA LETTER GRANTING OBSERVER STATUS

Date

Occurrence file no.

AIA granting of observer status

Dear

1. The Airworthiness Investigative Authority (AIA) is empowered to investigate military aircraft occurrences. The objective of a flight safety investigation is to advance aircraft transportation safety by identifying safety deficiencies and making recommendations designed to eliminate or reduce such deficiencies.

2. During the course of an occurrence investigation, the AIA may authorise a person to attend as an observer when the person is designated an observer by the CDS, is designated an observer by a Minister responsible for a department having a direct interest in the investigation, or, in the opinion of the AIA, the person has a direct interest in the subject matter of the investigation and will contribute to achieving the AIA's objective (CTAISB Act, Section 23 (2)).

3. By this letter, you are granted the status of an observer to this occurrence and may, under the supervision of a flight safety investigator:

Version 1 - 4B-1/4
a. attend at the occurrence site;

b. examine the aircraft, its component parts and contents;

c. unless otherwise prohibited by law, examine relevant documents as defined in Subsection 19 (16) of the Act, and relevant evidence pertaining to:

(1) the transportation activity during which the occurrence took place;

(2) the operating crew members involved in the operation of the aircraft;

(3) the aircraft, its component parts and contents; and

d. attend laboratory tests or analyses (CTAISB Act, Section 14).

4. Your attendance as an observer is subject to the following conditions:

a. You shall limit your activities at the occurrence site to those outlined by the Investigator-In-Charge;

b. You shall ensure that your activities do not restrict or otherwise interfere with AIA-assigned investigators in the performance of their duties;
and

c. You shall ensure that the information you gain as a result of your observer status is not disclosed to any unauthorised person.

c. Vous devez vous assurer que les renseignements obtenus grâce à votre statut d’observateur ne seront divulgués à aucune personne non autorisée.

5. Failure to comply with any of the above responsibilities could result in the immediate revocation of your observer status. (CTAISB Act, Section 23(3)).

5. Le défaut de vous conformer aux responsabilités susmentionnées pourrait entraîner la révocation immédiate de votre statut d’observateur. (Loi sur le BCEATST, article 23(3)).

6. You should also understand that the privileges of an observer will be exercised at your own risk.

6. Vous reconnaîsez également que vous exercerez les privilèges d’observateur à vos propres risques.

7. Please sign and return to the Investigator-in-Charge this original letter, indicating your understanding and acceptance of the above-mentioned conditions and responsibilities.

7. Bien vouloir signer et retourner une copie de cette lettre au enquêteur-chef, en indiquant que vous avez compris les conditions et les responsabilités susmentionnées et que vous les acceptez.

Sincerely,

S. Charpentier
Colonel
Airworthiness Investigative Authority

Veuillez agréer mes salutations distinguées,

S. Charpentier
Colonel
Autorité des enquêtes sur la navigabilité

I understand and accept the conditions outlined above with respect to my attendance as an observer at the subject investigation.

Je comprends et j’accepte les conditions énumérées ci-dessus relativement à ma présence à titre d’observateur dans le cadre de l’enquête.

I also understand that the privileges

Je comprends également que
of an observer will be exercised at my own risk, and I hereby agree to indemnify and save harmless the Department of National Defence for any damage or injuries I may suffer as a result of my attending the investigation as an observer.

j’exercerai mes privilèges d’observateur à mes propres risques et j’exonère, par les présentes, le ministère de la Défense nationale de toute responsabilité pour tout dommage ou toute blessure que je pourrais subir en raison de ma présence à titre d’observateur durant l’enquête.

Signature____________________________
___

Date_______________________

Signature____________________________
___

Date_______________________
ANNEX C - OBSERVER NON-DISCLOSURE AGREEMENT

Observer Non-Disclosure Agreement

The undersigned observer to the Flight Safety Investigation concerning the occurrence

___________________________________________  ____________________________________________
(near or at place)                              (on or about date)

hereby acknowledges and understands that Flight Safety Investigations are subject to the privileges and protections as provided for in the Canadian Transportation Accident Investigation and Safety Board Act, the Canadian Aeronautics Act and the Flight Safety Manual for the Canadian Forces. Flight Safety Investigations are intended for the sole use of the designated Airworthiness Investigative Authority, to advance flight safety. The undersigned agrees that any disagreements or disputes arising from the interpretation or application of the above-noted Acts and/or Manual, and/or any other applicable statute or regulations, shall be construed and adjudicated solely in accordance with the laws of Canada, and that the undersigned attorns exclusively to the jurisdiction of a Canadian court or tribunal of competent jurisdiction.

Therefore, as a condition of being allowed access to a Flight Safety Investigation, the undersigned hereby undertakes not to distribute, release, publish or discuss, or permit, advise or counsel others to distribute, release, publish or discuss, the contents of the Flight Safety Investigation and any related or associated reports, documents or findings to, or with, any person, body, organization, or any other entity, in any manner whatsoever, without the express prior written consent of the Airworthiness Investigative Authority.

___________________________________________  ____________________________________________
(Observer's type-written name)                 (Witness’ type-written name)
CHAPTER 5 - AIRWORTHINESS INVESTIGATOR CERTIFICATION AND AUTHORIZATION

INTRODUCTION

1. One of the tenets of the DND/CAF Airworthiness Program is that the work is done by authorized individuals. As outlined in Chapter 1, one of the tasks assigned to the AIA is to “assign investigative authority to organizations and individuals involved in the investigation of aviation-safety-related occurrences and issues.”

2. As explained in Chapter 4, in order to be “authorized,” individuals must be certified as being qualified to conduct airworthiness investigation activities and then they may become “authorized” to conduct airworthiness investigation activities on behalf of the AIA. While the AIA is the authority from which this authorization flows, for reasons of efficiency and appropriate span of control some of this certification/authorization is performed by designated individuals that conduct airworthiness activities on the AIA’s behalf.

3. AIA authorization to conduct airworthiness investigation flows to qualified/certified individuals in three ways: through the FSI tasking message that lists those individuals. through the duties inherent as a designated FS Officer/NCM and conducting activities for the FS program, or through specific delegation letters from the AIA to individuals that authorize specific functions (See Annex B – AIA Delegation of Authority – OBRs). This chapter outlines the process by which airworthiness investigators will be certified and authorized to conduct specific types of airworthiness investigations.

4. An important point of note is that the authority to conduct investigations is provided to individuals and is limited to an airworthiness context and “is not intended to interfere with the organizational command and control, management and resource authorities provided by other means such as the NDA [National Defence Act], the FAA” (as stated in the A-GA-005, Section 2, para 17) and other such authorities.

CERTIFICATION OF QUALIFICATION AUTHORITIES

5. There are four individuals involved in the issuance of airworthiness investigation credentials. These are the AIA, the Div FSO, the DFS Chief Investigator (CI) and the SI.

6. AIA. The AIA is normally the officer holding the position of DFS and the AIA’s authority, role and responsibilities are outlined in a CDS Order issued on behalf of the MND. The associated authorities and responsibilities are detailed in the DAOD 2015 and A-GA-005 and are summarized in Chapter 1. All
airworthiness investigation authorizations flow from the AIA to properly qualified and certified individuals.

7. Div FSO. The Div FSO is the officer assigned to the position of 1 Cdn Air Div FS Officer. The Div FSO normally has a combination of FS and operational experience as well as the FSC. For appropriate span of control and efficiency reasons, the AIA, through a letter of delegation, has designated the Div FSO to conduct certain investigator training courses and is the issuing authority for specific investigator categories and airworthiness authorizations on behalf of the AIA and as outlined below.

8. Chief Investigator. The CI is normally the officer appointed to the position of DFS 2. The AIA has designated the CI as having the responsibility for establishing and managing a training program for a sector of the airworthiness investigators as outlined below. This officer is also responsible for ensuring that there are a sufficient number of qualified personnel to complete Class II and Class I investigations. The CI will recommend appropriately skilled individuals for certification of their qualification by the AIA.

9. Senior Investigator. The SI is an IIC 1 on the DFS 2 staff. This individual is responsible for monitoring DFS investigator training files, for monitoring the quality of DFS investigator activities and through these activities, recommending IIC Category upgrades to the CI.

**AIRWORTHINESS CERTIFICATION FORMS**

10. All investigators and IICs that hold a valid category will be awarded a Certification Form in the format shown at Annex A. In addition, airworthiness investigators will be given a laminated, wallet size card that identifies them as a certified airworthiness investigator or IIC. As an individual upgrades their investigator status, the airworthiness investigator card will be appropriately endorsed.

**TRAINING RECORDS**

11. A training file will be kept for each individual who has either a BI or an IIC Category. This training file can be maintained as either an electronic or paper file. Training files for Division, Wing and Unit FS personnel holding a BI 2 and IIC 3 Category will be maintained by the Div FSO. Training files for all other BIs (such as investigation team members) or IICs and for all DFS staff will be maintained by DFS. This training file will contain the following applicable information as a minimum:

   a. FSC Course Report;

   b. copies of all formal training certificates of completion or course reports (for in-service and out-service courses);
c. copies of other training certificates or records of training conducted such as media contact training, salvage and recovery courses, biohazard and blood-borne pathogen familiarization etc;

d. tracking of all air accident investigation activities and the role assumed in the investigation (group involvement, planning, transfer of responsibility at various stages etc);

e. copies of all formal field training (Shadow and Acting IIC) reports; and

f. copies of all BI and IIC certification forms.

CERTIFICATION OF QUALIFICATION PROCESS

12. The Div FSO and the CI must assure themselves that the individual who is being recommended for an investigator or IIC category has met the appropriate standard (as indicated below). Training waived by the AIA will permit awarding of an "acting" category to these listed requirements but the requirements should be completed as quickly as possible.

13. As per direction issued in the A-GA-005 (Part 1, Section 2, paras 14 & 15), the AIA may issue exemptions to airworthiness (training) requirements that “cannot be achieved without considerable or unacceptable impact on (AIA) operations.” Normally it must be demonstrated that such exemptions would “not degrade safe operations, that they are justified and that it is in the interests of DND/CAF and the public.” “Safe operations” for the AIA means the conduct of safe and effective airworthiness investigations.

14. Basic Investigator 2. Prior to receiving a BI 2 Category, the individual must successfully complete the FSC.

15. Basic Investigator 1. The individual must be a BI 2 and have completed a basic aviation safety investigator course, such as those offered at the SCSI, Cranfield University, the NTSB Training Facility or a similar institution.

16. IIC 3. Prior to receiving an IIC 3 Category, the individual must successfully complete the FSC;

17. IIC 2. Prior to receiving an IIC 2 Category, the individual must have a BI 1 category. In addition, the investigator should have completed the DFS OJTS and Acting IIC phase of training as outlined in Chapter 4. The AIA can, in consideration of exemptions to airworthiness regulations as indicated above, waive this training. The IIC of the investigation in which shadow training is conducted must complete a brief report for the SI that includes the investigation aspects covered, the skills demonstrated and development levels noted of the trainee. The IIC of the investigation in which the Acting IIC Phase of training is
conducted must complete a brief written progress report for the SI on the trainee that assesses:

a. investigation skills;
b. organizational skills;
c. personnel management skills;
d. writing skills;
e. other skills (salvage and recovery, dealing with the media, NOK etc); and
f. a recommendation for employment as an IIC 2 or recommendations for further training.

18. Individuals upgrading to an IIC 2 category must also successfully complete an in-house training module dealing with the legal aspects of investigations. This module involves a self-study package developed by the SI and certified by CFLA that includes a closed book multiple choice examination on the study module. The passing standard for this examination is 85%, corrected to 100%.

19. The SI will conduct a thorough review of the training file of the individual being recommended for IIC 2 Category. If the SI is satisfied that the individual has met all standards, then they will forward a recommendation to the CI for the upgrade to IIC 2 Category. The CI will then review the individuals training file and, if satisfied, nominate the individual to the AIA for consideration and approval of IIC 2 certification.

20. IIC 1. A very similar process occurs for the granting of IIC 1 status. Prior to receiving an IIC 1 Category, the individual must have held an IIC 2 Category (or completed the equivalent training as determined by the Senior and CIs). In addition, the investigator should have completed the DFS OJTS and Acting IIC phases of training as outlined in Chapter 4. This upgrade also involves completing a self-study package developed by the SI that includes a closed book multiple choice examination on the study module. The passing standard for this examination is 85%, corrected to 100%. The AIA may, in consideration of exemptions to airworthiness regulations as indicated above, waive some or all of this training. The SI will conduct the Acting IIC phase of training and will complete a brief written progress report for the CI on the individual that assesses the areas listed above (para 15).

21. The CI will conduct a thorough review the training file of the individual being recommended for IIC 1 category. If the CI is satisfied that the individual has met all standards, then he will forward a written recommendation to the AIA. If some of the pre-requisites for an IIC have not been met, then the CI must
indicate the rationale for waiving these requirements or awarding an acting Category with restrictions.

22. The AIA will review the recommendations put forward by the CI and, if satisfied, award an IIC 1 category or A/IIC 1 category.

23. A summary of certification authorities is outlined in Table 1 below.

<table>
<thead>
<tr>
<th>AIRWORTHINESS INVESTIGATION CATEGORY</th>
<th>RECOMMENDING AUTHORITY</th>
<th>CERTIFICATION AUTHORITY</th>
</tr>
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<tr>
<td>Basic Investigator 2 (BI 2)</td>
<td>FSC Course Officer</td>
<td>Div FSO</td>
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<tr>
<td>Basic Investigator 1 (BI 1)</td>
<td>SI and CI</td>
<td>AIA</td>
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<tr>
<td>Investigator In Charge 3 (IIC 3)</td>
<td>FSC Course Officer</td>
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</tr>
<tr>
<td>Investigator In Charge 1 (IIC 1)</td>
<td>SI and CI</td>
<td>AIA</td>
</tr>
</tbody>
</table>

Table 1 Certification Authorities
ANNEX A – SAMPLE CERTIFICATION CERTIFICATE

This is to certify that

____________________________________

is an authorized/qualified

____________________________________

The individual named above is authorized to conduct investigations into aircraft occurrences within the limitations outlined in the Airworthiness Investigation Manual. These investigations are conducted under the authority of the Airworthiness Investigative Authority and in accordance with section 4.2(n) of the Aeronautics Act.

_____________________

I.M. Safe

Colonel

Airworthiness Investigative Authority

Dated ________________
Annex B
Chapter 5
A-GA-135-003/AG-001

ANNEX B – AIA DELEGATION OF AUTHORITY FOR OBR ACCESS

1150-21 (DFS 2) 1150-21 (DSV 2)

October 2013 Le octobre 2013

Distribution List Liste de distribution

AIA DELEGATION OF AUTHORITY FOR OBR ACCESS DÉLÉGATION DE L’AEN POUR L’ACCÈS AUX DONNÉES D’OBR

References: A. CDS Delegation Order to Airworthiness Investigative Authority (18 July 2008)

B. Aeronautics Act

C. Canadian Transportation Investigation and Safety Board Act


E. Flight Safety for the Canadian Forces (A-GA-135-001/AA-001)

1. The Airworthiness Investigative Authority (AIA) is authorized IAW Ref A to delegate investigative authorities. IOT facilitate timely responses to flight safety

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investigators’ need to both assess potential flight safety occurrences and to investigate confirmed flight safety occurrences, I delegate authority to download, analyze, and view certain on-board recorder (OBR) data as follows:

a. The officers qualified as Investigator-In-Charge (IIC) III, or above, at DFS are, for their respective aircraft fleets, delegated the responsibility to authorize Wing and Unit Flight Safety Officers to download, analyze, and view OBR data;

b. When monitoring WARN DFS, the officers qualified as Investigator-In-Charge (IIC) III, or above, at DFS are, for any aircraft fleet, delegated the responsibility to authorize Wing and Unit Flight Safety Officers to download, analyze, and view OBR data outside of normal working hours; and

c. The officers holding the position of Wing Flight Safety Officer (WFSO) at 3, 4 and 15 Wings or, in the event of their absence or incapacity or if the positions are vacant, the officers performing the duties and functions of the WFSO at 3, 4, or 15 Wings, are delegated the authority to download, analyze, and view non-designated OBR data for their respective aircraft fleets for occurrences in which they are the IIC or will likely be the IIC.
et de consulter les données d’OBR non désignées pour leurs flottes d’aéronefs respectives en ce qui a trait aux événements pour lesquels ils sont, ou seront probablement, l’ED.

2. When conducting activities as authorized above, delegated WFSOs shall keep the AIA informed, through the appropriate DFS desk officer, with respect to activities associated with the OBRs with which they are engaged.

3. This standing authority associated with the positions identified above will remain in place until rescinded or modified by the AIA. This delegation in no way includes other retained authorities, such as distribution to the chain of command of privileged information, identified in Chapter 6, Annex C, of Reference D.

L’autorité chargée des enquêtes sur la navigabilité,

S. Charpentier
Colonel
Airworthiness Investigative Authority
### Annex: Reference Links

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<tr>
<td>Information</td>
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### Distribution List

- **Internal:**
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  - 3 Wing FSO
  - 4 Wing FSO
  - 15 Wing FSO
- **External:**
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  - OSV 4<sup>e</sup> Ere
  - OSV 15<sup>e</sup> Ere
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Dated XXXX 20XX

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CHAPTER 6 - AIRWORTHINESS INVESTIGATOR AUTHORITIES

INTRODUCTION

1. The Airworthiness Program is supported by a well-defined documentation hierarchy that contains the necessary rules, regulations and standards to ensure an acceptable level of aviation safety. One of the main tasks of the Airworthiness Investigative Authority is to “assign investigative authority to organizations and individuals involved in the investigation of aviation-safety-related occurrences and issues.” Although this has been done effectively for the past several decades within the FS Program, the process for doing so was not formalized.

2. The Airworthiness Program dictates that “the scope and depth of airworthiness authority within an organization must be based on the capability of the organization...and the authority assigned to individuals within the organization is based on their demonstrated skills, knowledge, experience and competence...nominated individuals must accept the responsibilities and authorities for which they have been nominated.” In keeping with the airworthiness principle that work is only done by authorized individuals, a process for assigning airworthiness investigative authorities was developed.

3. Of note, the authority placed upon the AIA by the MND through the Aeronautics Act and other Acts is quite broad and in some cases far reaching in its empowerment. Because of the nature of some of these powers, the AIA’s full authority is not delegated to all investigators at all times. The aim of this chapter is to outline how these airworthiness investigative authorities are assigned to individuals and organizations through time and circumstances associated with investigations.

BACKGROUND

4. The RCAF and the CAF have been conducting FS Investigations since 1942. The process that evolved over the years was to adopt a non-confrontational approach to investigations, in keeping with the principles of the CAF FS Program. However, when necessary, the powers of the NDA are employed.

SUPPORTING DOCUMENTS

5. Airworthiness investigative authorities are derived from the Aeronautics Act and the CTAISB Act in addition to the NDA. In order to exercise these authorities properly, BIs and IICs must have the appropriate training and the appropriate experience. Moreover, some authorities will require specialized training and, due to the nature of these authorities, can only be used in exceptional circumstances. These latter authorities will be retained by the AIA.
and only delegated to a specific individual for specific investigations and for a specified period of time.

6. Another complicating factor is that the DND/CAF utilizes contractors and Public Servants to provide a variety of services. These services include, but are not limited to, the dry lease of aircraft that are flown by CAF personnel, a variety of aircraft maintenance work and contracted air training services. The civilian personnel engaged in conducting or supporting DND/CAF flying operations are not subject to the NDA, so to ensure contractors and Public Servants involved with military aviation conform to the Airworthiness Program, contract law is invoked (A-GA-005, Part 1, Section2, para 6). In practice this requires that contracts include an obligation to comply with the requirements of the Airworthiness Program; however, this is just that, a contractual obligation rather than a legal obligation. Consequently, if these individuals are involved in an occurrence, airworthiness investigators do not have any legal means of compelling contractor personnel to participate in an investigation other than to ask them to do so voluntarily. Refusal on the part of person may bear a contractual penalty but not a personal legal consequence.

7. The AIA also could decide to utilize his delegated power to convene a BOI under section 6.3 of the Aeronautics Act. In this circumstance, investigators have additional powers allocated under the Inquiries Act, one of which may compel testimony from witnesses regardless of their desires. This would be an exceptional circumstance and one that the AIA would pursue only if left no other route to achieve the AIA investigation mandate.

**Types of Authorities**

8. AIA Authorized DND/CAF accident investigators will have three types of authorities available to undertake airworthiness investigations: standing authorities, retained authorities, and specifically delegated authorities. Standing authorities are assigned with a particular airworthiness investigator qualification. Retained authorities are only delegated by the AIA in specific circumstances and for a specific period of time. Specifically delegated authorities are granted to certain individuals for routine investigation duties but are not granted to all investigators of similar standing. This last group is typically delegated through an AIA letter to individuals in specific circumstances, such as a WFSO at a particular location who is delegated the authority to download OBR information without seeking AIA permission to do so (see Chapter 5, Annex B).

**Groups of Airworthiness Authorities**

9. Airworthiness Investigation Authorities are grouped into six general areas:

   a. authority to conduct interviews;

   b. authority to search, seize and test items (to destruction if necessary);
c. authority to restrict access to investigation sites;
d. authority to approve airworthiness investigation reports;
e. authority to obtain medical information; and
f. authority to gather and release information.

10. Interviews. FS investigation interviews are traditionally done in a non-confrontational manner. In addition, witness statements provided to a FS investigator are treated as "privileged" in that these statements cannot be used for legal, administrative, disciplinary or other purposes. The Aeronautics Act and the CTAISB Act require that witness statements must be treated as privileged. If witnesses are reluctant or refuse to provide information to an investigator, the NDA can be invoked if the witness is subject to the code of service discipline. However, if the witness is not subject to the NDA (i.e. a civilian contractor or Public Servant), then that person cannot be compelled to submit to an interview or answer the airworthiness investigator's questions, despite the contractual obligation “to conform to the airworthiness instruments of the Airworthiness Program.” In other words, personnel who are not subject to the code of service discipline can only be interviewed if they voluntarily agree to participate. However, failure to undertake an interview by an airworthiness investigator is likely a breach of the contract with DND/CAF. In cases such as this, the IIC should consult with the AIA to consider what further action, if any, should be taken. Again, and as a last resort for pursuit of the AIA’s investigation mandate, a BOI under section 6.3 of the Aeronautics Act may be convened to get witness testimony and cooperation; however, that route would only be pursued by the AIA under exceptional circumstances.

11. Search and Seizure of Items. Searches for items related to an occurrence can only be done on DND property unless the owner of the property agrees to allow investigators to search the property. In addition, only items that are the property of DND/CAF can be seized during these searches, unless the owner of the property or item agrees to permit DND/CAF to take possession of the property or item for purposes of the investigation.

12. Articles that have been seized after a FS occurrence are either impounded or quarantined. Impounding of articles refers to safeguarding the material to prevent their loss or alteration. Articles such as records, documents, films, tapes, and forms that may be required for the investigation are impounded. Quarantining refers to the withholding and safeguarding of physical evidence or hazardous items. Such items may include complete aircraft components, equipment, stores, and production lots or batches. Procedures to be followed for impounding and quarantining of materiel are outlined in the A-GA-135-001/AA-001, Chapter 8.
13. **Restricting Access to Investigation Sites.** Limiting access to investigation sites is required for the safety of personnel (both military and civilian), the protection of evidence and the protection of information. The military has the authority to restrict access to an occurrence site on DND land only. Military personnel have no authority to restrict access to an occurrence site on Crown land under the control of either another Federal Government Department or a Provincial Government. In addition, military personnel have no authority to restrict access to privately owned property. If an investigation site is on Crown land or on private property, then the cooperation of the applicable Crown Authority, land owner and/or the assistance of the local authorities (police) must be sought. Police enforcement of a restriction cordon for public safety, to preserve evidence or to appease local property owners, has been forthcoming in past occurrences but this cooperation was not a legal requirement.

14. **Approval of Investigation Reports.** Once a FS report has been drafted, it must be finalized and approved. Although ultimate approval authority rests with the AIA, some report approval authority is assigned for efficiency purposes to WFSOs/IIC 3s for IRs, SRs and CRs. Once a report has been approved, it cannot be altered unless the investigation is reopened by the AIA.

15. **Personal Health Information.** Personal health information under the control of DND/CAF shall not, without the consent of the individual to whom it relates, be disclosed except in accordance with section 8 of the Privacy Act. Paragraph 8(2)(b) of the Privacy Act provides that personal information may be disclosed for any purpose in accordance with any Act of Parliament or any regulation made thereunder that authorizes its disclosure, including, but not limited to the Canadian Transportation Accident Investigation and Safety Board Act (CTAISB) and the Aeronautics Act.

16. Personal health information collected during a FS investigation shall be safeguarded according to its security designation and shall only be used for the purpose for which it was obtained or compiled or for uses consistent with that purpose. This includes using the information to ensure individuals get any treatment they require as a result of an FS investigation. The extent of use of personal health information by authorized individuals shall be proportionate to the FS investigation being fulfilled and shall extend only as far as is necessary to achieve the FS investigation purpose. This means that unless personal health information is necessary for an individual to carry out one of his/her officially assigned functions or duties, personal health information shall only be shared with investigation team members based on their requirement for the information to complete the investigation. Personal health information collected during a FS investigation shall not be used for disciplinary or administrative purposes.

17. In addition to the permitted disclosures under subsection 8(2) of the Privacy Act, personal health information collected during a FS investigation shall only be disclosed in accordance with the CTAISB or the Aeronautics Act and only as necessary for the interest of aviation safety. This means, for example, that
personal health information may be reported if it is relevant to understanding the investigation analysis or that, similar to the TSB, toxicology results may be reported to explain human factor degradations to cognitive behavior. As such, when medical factors are identified as cause factors, detailed personal health information shall be included in the medical report from the investigating Flight Surgeon to the IIC. Personal health information shall only be described by the IIC in general terms in the report (i.e. pilot was taking medications for a chronic condition that did/may have impaired his/her judgement.). If deemed necessary after discussion with the IIC, the investigating Flight Surgeon may also create a Separate Medical Report (Protected B) with detailed personal health information. Distribution of this report shall be restricted to the Medical Member of the Investigation Team, the AMA, and the 1 Cdn Air Div Surgeon. At the discretion of the AIA, if the report is deemed to be of interest of aviation safety, the report may also be disclosed to the CO CAFEME for the purpose of setting aircrew medical standards. Legal advice should be sought before personal information is disclosed.

18. **Release of Information.** There are four types of releasable airworthiness investigation information, which may be combined in forms such as in a "statistical release" and "reports" or singular categories such as “only factual information." They are:

a. factual information;

b. analysis;

c. findings and cause factors; and

d. recommendations.

19. **Privilege of Certain Information.** In addition to the four types of releasable information listed above, the concept of "privilege" as defined in the **CTAISB Act** must be superimposed. The forms of communication/information to which "privilege" applies have particular legal protections that are outlined in the **CTAISB Act**. Privilege is applied to:

a. on board recordings (OBRs), which include:

   (1) a recording of voice communications originating from an aircraft or received on or in the flight deck of an aircraft; or

   (2) a video recording of the activities of the operating personnel of an aircraft;

b. statements, which include:
(1) an oral, written or recorded statement relating to a military aircraft occurrence which is given to an airworthiness investigator; or

(2) a transcript or a summary of a statement referred to in subpara (i) above; and

c. a communication record, which means the whole or part of any record, recording, copy, transcript or substantial summary of any type of communications respecting air traffic control or related matters.

20. Release, Viewing or Hearing OBR Data. The AIA has retained the release authority for all data associated with OBRs. Similarly, viewing or hearing of OBRs is retained by the AIA except to specific individuals through an AIA delegation letter (see Chapter 5, Annex B). This is due to the sensitive nature of such data and the legal complexities that must be considered for such circumstances. Any delegated person is charged within the AIA delegation letter with being completely aware of the legal aspects associated with the release, viewing or hearing such data. OBRs that are in use with the DND/CAF and their identification and associated protocols are more complex due to the AIA permitting a dual purpose usage of certain devices. These devices and data are further explained in the A-GA-135-001/AA-001, Chapter 8. Dual purpose usage refers to devices and data sets that can be used for one purpose, such as training or debriefing for normal missions, but become OBRs when the aircraft is involved in a FS occurrence. Sometimes viewing, hearing or processing the data from a dual purpose device is the only way to determine if the data is OBR data and for this reason, the AIA has made certain individuals responsible for such determinations through these specific delegations.

21. Release of Statements or Communications Records. The AIA retains all authority for release of statements or Communication Records. All requests for this information should be forwarded to the AIA for consideration and this information will only be released from this level. Generally, this information will not be released except as required by law because it may compromise the investigation or the principles associated with the FS program. In any case the AIA will maintain the "privilege" status demanded for this information in the CTAISB Act.

22. Also, there may be orders, intra-departmental protocols and AIA processes that effect the information gathered during an AIA airworthiness investigation and that must be considered when releasing such information. An example of such consideration is the manner that the DND/CAF handles FDR data. While not under any specific statutory or regulatory protection, there are Air Command Orders (ACOs) that must be respected when dealing with release of this specific type of information.
23. Other types of information that must be considered differently for release are comments received from Persons of Direct Interest (PDI) or third parties (such as OEMs) and special reports prepared for investigations by experts or special organizations. First, personal comments (which PDI returns and OEM remarks fall under) must be tightly controlled and CTAISB Act privilege, Privacy Act rules and Access to Information Act processes must be considered. The AIA may decide that safety is an overriding factor and choose to release such information from that perspective but will take every precaution to safeguard the identity and source of such released information. Similarly, reports by specialist advisers or expert team members prepared exclusively for the AIA in the course of an airworthiness investigation are generally not released in whole but may be quoted in released information or form part of the final investigation report. In general, these reports are considered property of the AIA and he/she must be consulted by the specialist advisers or expert organization should release of an expert report be sought by other organizations or for purposes other than the airworthiness investigation.

24. There are six entities to which airworthiness investigation information can be released. These are:

   a. the Chain of Command;
   b. the DND/CAF general population (the internal audience);
   c. Next of Kin (in several different categories - see Chapter 7);
   d. the media;
   e. the general public (the external audience); and
   f. other investigating agencies, civil or military (in several different categories).

25. The protocols for release of information to other investigating agencies are outlined in Chapters 8 & 9.

26. A factor that must be considered with respect to the release of information is whether or not the investigation is completed. The premature release of information prior to the completion of an airworthiness investigation can sometimes compromise the investigation. Therefore, the distinction will be made between ongoing and completed investigations. Information concerning ongoing investigations must be very tightly controlled particularly since the onward release of ongoing investigations is not illegal and therefore parties with such information could decide to further distribute the information, which could be incomplete or inaccurate. Also, the publication of information prior to the appropriate time could prejudice safety measures or prevent the implementation of timely, voluntary PMs.
DELEGATION OF AIA AUTHORITY TO INDIVIDUALS

27. Standing Authorities. Standing authorities are exercised by the individuals holding a current qualification of the type specified in Annex A. These standing authorities are continuously active unless specifically revoked by the AIA. For the sake of clarity, the Standing Authorities for each category of investigator are listed in Annex B.

28. Retained Authorities. A list of retained authorities that may be delegated by the AIA is outlined in Annex C. These authorities will normally only be delegated to a particular individual and for a specified period of time and will be delegated by the AIA via message or e-mail. For the sake of brevity, the authorities to be delegated will refer to the serial number listed in Annex C. A sample AIA tasking, Annex D, may be used to delegate Retained.
ANNEX A – STANDING AUTHORITIES

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<td>Conduct interviews concerning Class IV Investigations with personnel subject to the code of service discipline</td>
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<td>Conduct interviews concerning Class IV Investigations with civilian personnel who voluntarily agree to be interviewed</td>
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<td>Search military facilities for items related to an aircraft occurrence</td>
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<td>Order that a military item be tested (possibly to destruction)</td>
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<td>Search civilian facilities/property for items related to an aircraft occurrence with the owner's permission</td>
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<td>Restrict access to an investigation site on DND controlled land/water</td>
<td>IIC 3, IIC 2, IIC 1</td>
</tr>
<tr>
<td>SA 3.b.</td>
<td>Restrict access to an investigation site on Crown Land/Water controlled land by another Federal Government Department</td>
<td>See Note 2</td>
</tr>
<tr>
<td>SA 3.c.</td>
<td>Restrict access to an investigation site on Crown Land/Water controlled by a Province</td>
<td>See Note 2</td>
</tr>
<tr>
<td>SA 3.d.</td>
<td>Restrict access to an investigation site on privately owned land/water</td>
<td>Retained (see Note1)</td>
</tr>
<tr>
<td>SA 4.</td>
<td>Approve Investigation Reports</td>
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<td>SA 4.a.</td>
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<tr>
<td>SA 4.b.</td>
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<td>IIC 3</td>
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<td>SA 4.c.</td>
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<td>SA 4.d.</td>
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<tr>
<td>SA 5.b.</td>
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<td>IIC 1, IIC 2</td>
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<td>SA 5.c.</td>
<td>Create Separate Medical Report</td>
<td>Medical Member</td>
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<td>SA 6.</td>
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<td>Ongoing Investigations</td>
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<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class IV investigation to Commanders</td>
<td>IIC 3, IIC 2, IIC 1, BI 2, BI 1</td>
</tr>
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<td>SA 6.a.(2)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class III investigation to Commanders</td>
<td>IIC 3, IIC 2, IIC 1, BI 2, BI 1</td>
</tr>
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<td>SA 6.a.(4)</td>
<td>Release of factual information concerning an ongoing Class I investigation to Commanders</td>
<td>The IIC of the investigation</td>
</tr>
<tr>
<td>SA 6.a.(5)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class IV investigation to DND/CAF personnel</td>
<td>The IIC of the investigation (see Note 5)</td>
</tr>
<tr>
<td>SA 6.a.(6)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class III investigation to DND/CAF personnel</td>
<td>The IIC of the investigation (see Note 5)</td>
</tr>
<tr>
<td>SA 6.a.(7)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class II investigation to DND/CAF personnel</td>
<td>Retained</td>
</tr>
<tr>
<td>SA 6.a.(8)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class I investigation to DND/CAF personnel</td>
<td>Retained</td>
</tr>
<tr>
<td>SA 6.a.(9)</td>
<td>Release of factual information concerning an ongoing investigation to NOK</td>
<td>The IIC of the investigation (see Note 6)</td>
</tr>
<tr>
<td>SA 6.a.(10)</td>
<td>Release of factual information concerning an ongoing Class I, Class II, Class III or Class IV investigation to the media</td>
<td>The IIC of the investigation</td>
</tr>
<tr>
<td>SA 6.b.</td>
<td>Completed Investigations</td>
<td>(see Note 6)</td>
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</tr>
<tr>
<td>SA 6.b.(1)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to Commanders</td>
<td>IIC 3, IIC 2, IIC 1, BI 2, BI 1</td>
</tr>
<tr>
<td>SA 6.b.(2)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to DND/CAF personnel</td>
<td>IIC 3, IIC 2, IIC 1, BI 2, BI 1</td>
</tr>
<tr>
<td>SA 6.b.(3)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to the media</td>
<td>IIC 3, IIC 2, IIC 1, BI 2, BI 1</td>
</tr>
<tr>
<td>SA 6.b.(4)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to the public through ATI</td>
<td>IIC 3, IIC 2, IIC 1, BI 2, BI 1</td>
</tr>
<tr>
<td>SA 6.b.(5)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class I &amp; II investigation to Commanders, DND/CAF personnel, NOK, the media or the public through ATI</td>
<td>Retained (see Note 6)</td>
</tr>
</tbody>
</table>

Note 1: Retained authority for these functions rests with the AIA and the power to conduct a BOI under section 6.3 of the Aeronautics Act, as per the MND delegation indicated in the AIA’s CDS Delegation Order (see Annex C).

Note 2: Restriction of access to the occurrence site must be coordinated with the appropriate authorities.

Note 3: Personal Health Information is discussed in detail in Chapter 6, paragraphs 15-17. It is essential that this information is reviewed and understood before any release of personal health information is made.

Note 4: All information released from an airworthiness investigator to any individual must be de-identified. Names or individual call signs are not to be used and, to the extent possible, the identity of individuals must be protected.

Note 5: Information released under this authority to DND/CAF personnel may only be used to further remedial action or for PM purposes. The release of such
information to DND contractors (such as OEM or AMO) is covered within this authority.

Note 6: The information released in these events is governed by AIA policy. For example, the information released to media or NOK for an on-going investigation is limited to the information released in the FTI and the explanations of such facts. Similarly, the release of completed Class I & II investigations is IAW AIA administrative procedures and only by assigned individuals. The release of such information to DND contractors (such as OEM or AMO) is covered within this authority.
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<thead>
<tr>
<th>Serial</th>
<th>Authority</th>
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<tbody>
<tr>
<td></td>
<td><strong>Basic Investigator 2 (BI 2)</strong></td>
</tr>
<tr>
<td>SA 1.a</td>
<td>Conduct interviews concerning Class IV Investigations with personnel subject to the code of service discipline</td>
</tr>
<tr>
<td>SA 1.b</td>
<td>Conduct interviews concerning Class III Investigations with personnel subject to the code of service discipline</td>
</tr>
<tr>
<td>SA 1.c</td>
<td>Conduct interviews concerning Class II Investigations with personnel subject to the code of service discipline</td>
</tr>
<tr>
<td>SA 1.d</td>
<td>Conduct interviews concerning Class I Investigations with personnel subject to the code of service discipline</td>
</tr>
<tr>
<td>SA 1.e</td>
<td>Conduct interviews concerning Class IV Investigations with civilian personnel who voluntarily agree to be interviewed</td>
</tr>
<tr>
<td>SA 1.f</td>
<td>Conduct interviews concerning Class III Investigations with civilian personnel who voluntarily agree to be interviewed</td>
</tr>
<tr>
<td>SA 1.g</td>
<td>Conduct interviews concerning Class II Investigations with civilian personnel who voluntarily agree to be interviewed</td>
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<tr>
<td>SA 1.h</td>
<td>Conduct interviews concerning Class I Investigations with civilian</td>
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<td>Section</td>
<td>Description</td>
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<td>SA 2.b.</td>
<td>Impound military items required for an aircraft occurrence investigation</td>
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<tr>
<td>SA 2.c.</td>
<td>Quarantine military items required for an aircraft occurrence investigation</td>
</tr>
<tr>
<td>SA 4.c.</td>
<td>Approve submission of Initial Report (IR)</td>
</tr>
<tr>
<td>SA 5.a.</td>
<td>Gather and quarantine Personal Health Information</td>
</tr>
<tr>
<td>SA 6.a.(1)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class IV investigation to commanders</td>
</tr>
<tr>
<td>SA 6.a.(2)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class III investigation to commanders</td>
</tr>
<tr>
<td>SA 6.b.(1)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to commanders.</td>
</tr>
<tr>
<td>SA 6.b.(2)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to DND/CAF personnel (see Note 1).</td>
</tr>
<tr>
<td>SA 6.b.(3)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to the media.</td>
</tr>
<tr>
<td>SA 6.b.(4)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to the public through ATI</td>
</tr>
<tr>
<td>Basic Investigator 1 (BI 1)</td>
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<tr>
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<td>Conduct interviews concerning Class III Investigations with personnel subject to the code of service discipline</td>
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<tr>
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<td>Conduct interviews concerning Class II Investigations with personnel subject to the code of service discipline</td>
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<tr>
<td><strong>SA 1.d.</strong></td>
<td>Conduct interviews concerning Class I Investigations with personnel subject to the code of service discipline</td>
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<tr>
<td><strong>SA 1.e.</strong></td>
<td>Conduct interviews concerning Class IV Investigations with civilian personnel who voluntarily agree to be interviewed</td>
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<tr>
<td><strong>SA 1.f.</strong></td>
<td>Conduct interviews concerning Class III Investigations with civilian personnel who voluntarily agree to be interviewed</td>
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<td><strong>SA 1.g.</strong></td>
<td>Conduct interviews concerning Class II Investigations with civilian personnel who voluntarily agree to be interviewed</td>
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<tr>
<td><strong>SA 1.h.</strong></td>
<td>Conduct interviews concerning Class I Investigations with civilian personnel who voluntarily agree to be interviewed</td>
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<td><strong>SA 2.b.</strong></td>
<td>Impound military items required for an aircraft occurrence investigation</td>
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<td><strong>SA 2.c.</strong></td>
<td>Quarantine military items required for an aircraft occurrence investigation</td>
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<tr>
<td><strong>SA 4.c.</strong></td>
<td>Approve an Initial Report (IR)</td>
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<td><strong>SA 5.a.</strong></td>
<td>Gather and quarantine Personal Health Information</td>
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<tr>
<td>SA 6.a.(1)</td>
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<tr>
<td>SA 6.a.(2)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class III investigation to commanders</td>
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<tr>
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</tr>
<tr>
<td>SA 6.b.(2)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III&amp; IV investigation to DND/CAF personnel (see Note 1).</td>
</tr>
<tr>
<td>SA 6.b.(3)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III&amp; IV investigation to the media.</td>
</tr>
<tr>
<td>SA 6.b.(4)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III&amp; IV investigation to the public through ATI</td>
</tr>
</tbody>
</table>

**Investigator In Charge 3 (IIC 3)**

| SA 1.a. | Conduct interviews concerning Class IV Investigations with personnel subject to the code of service discipline |
| SA 1.b. | Conduct interviews concerning Class III Investigations with personnel subject to the code of service discipline |
| SA 1.c. | Conduct interviews concerning Class II Investigations with personnel subject to the code of service discipline |
| SA 1.d. | Conduct interviews concerning Class I Investigations with personnel subject to the code of service discipline |
| SA 1.e. | Conduct interviews concerning Class IV Investigations with civilian personnel who voluntarily agree to be interviewed |
| SA 1.f. | Conduct interviews concerning Class III Investigations with civilian personnel who voluntarily agree to be interviewed |
| SA 1.g. | Conduct interviews concerning Class II Investigations with civilian personnel who voluntarily agree to be interviewed |
| SA 1.h. | Conduct interviews concerning Class I Investigations with civilian personnel who voluntarily agree to be interviewed |
| SA 2.a. | Search military facilities for items related to an aircraft occurrence |
| SA 2.b. | Impound military items required for an aircraft occurrence investigation |
| SA 2.c. | Quarantine military items required for an aircraft occurrence investigation |
| SA 2.e. | Search civilian facilities for items related to an aircraft occurrence with the owner's permission |
| SA 2.g. | Impound civilian items required for an aircraft occurrence investigation with the owner's permission |
| SA 2.i. | Quarantine civilian items required for an aircraft occurrence investigation with the owner's permission |
| SA 2.k. | Order that a civilian item be tested (possibly to destruction) with the owner's permission |
| SA 3.a. | Restrict access to an investigation site on DND controlled land |
| SA 4. a. | Approve a Supplementary Report (SR) |
| SA 4. b. | Approve a Combined Report (CR) |
| SA 4. c. | Approve an Initial Report (IR) |
| SA 5. a. | Gather and quarantine Personal Health Information |
| SA 6.a.(1) | Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class IV investigation to commanders |
| SA 6.a.(2) | Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class III investigation to commanders |
| SA 6.a.(5) | Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class IV investigation (for which the individual is the IIC) to DND/CAF personnel (see Note 1) |
| SA 6.a.(6) | Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class III investigation (for which the individual is the IIC) to DND/CAF personnel (see Note 1) |
| SA 6.b.(1) | Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III & IV investigation to commanders. |
| SA 6.b.(2) | Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III & IV investigation to DND/CAF personnel (see Note 1) |
| SA 6.b.(3) | Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III & IV investigation to the media. |
| SA 6.b.(4) | Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III & IV investigation to the public through ATI |

Investigator In Charge 2 (IIC 2)

<p>| SA 1.a. | Conduct interviews concerning Class IV Investigations with personnel subject to the code of service discipline |
| SA 1.b. | Conduct interviews concerning Class III Investigations with personnel subject to the code of service discipline |
| SA 1.c. | Conduct interviews concerning Class II Investigations with personnel subject to the code of service discipline |
| SA 1.d. | Conduct interviews concerning Class I Investigations with personnel subject to the code of service discipline |
| SA 1.e. | Conduct interviews concerning Class IV Investigations with civilian personnel who voluntarily agree to be interviewed |
| SA 1.f. | Conduct interviews concerning Class III Investigations with civilian personnel who voluntarily agree to be interviewed |
| SA 1.g. | Conduct interviews concerning Class II Investigations with civilian personnel who voluntarily agree to be interviewed |
| SA 1.h. | Conduct interviews concerning Class I Investigations with civilian personnel who voluntarily agree to be interviewed |
| SA 2.a. | Search military facilities for items related to an aircraft occurrence |
| SA 2.b. | Impound military items required for an aircraft occurrence investigation |
| SA 2.c. | Quarantine military items required for an aircraft occurrence investigation |
| SA 2.d. | Order that a military item be tested (possibly to destruction) |
| SA 2.e. | Search civilian facilities for items related to an aircraft occurrence with the owner's permission |
| SA 2.g. | Impound civilian items required for an aircraft occurrence investigation with the owner's permission |
| SA 2.i. | Quarantine civilian items required for an aircraft occurrence investigation with the owner's permission |
| SA 2.k. | Order that a civilian item be tested (possibly to destruction) with the owner's permission |
| SA 3.a. | Restrict access to an investigation site on DND controlled land |
| SA 4.c. | Approve an Initial Report (IR) |
| SA 5.a. | Gather and quarantine Personal Health Information |
| SA 5.b. | Share appropriate Personal Health information with selected and appropriate investigation team members |
| SA 6.a.(1) | Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class IV investigation (for which the individual is the IIC) to commanders |
| SA 6.a.(1) | Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class III investigation (for which the individual is the IIC) to commanders |
| SA 6.a.(3) | Release of factual information concerning an ongoing Class II investigation (for which the individual is the IIC) to commanders |
| SA 6.a.(5) | Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class IV investigation (for which the individual is the IIC) to DND/CAF personnel (see Note 1) |
| SA 6.a.(6) | Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class III investigation (for which the individual is the IIC) to DND/CAF personnel (see Note 1) |
| SA 6.a.(9) | Release of factual information concerning an ongoing investigation (for which the individual is the IIC) to NOK |
| SA 6.b.(1) | Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to commanders |
| SA 6.b.(2) | Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to DND/CAF personnel (see Note 1) |
| SA 6.b.(3) | Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class II &amp; IV I investigation to the media |
| SA 6.b.(4) | Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to the public through ATI |</p>
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<th></th>
<th>Investigator In Charge 1 (IIC 1)</th>
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<td>SA 2.a</td>
<td>Search military facilities for items related to an aircraft occurrence</td>
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<td>Order that a military item be tested (possibly to destruction)</td>
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<td>SA 2.e.</td>
<td>Search civilian facilities for items related to an aircraft occurrence with the owner's permission</td>
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<td>SA 2.g.</td>
<td>Impound civilian items required for an aircraft occurrence investigation with the owner's permission</td>
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</tr>
<tr>
<td>SA 3.a.</td>
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<tr>
<td>SA 4.c.</td>
<td>Approve an Initial Report (IR)</td>
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<tr>
<td>SA 5.a.</td>
<td>Gather and quarantine Personal Health Information</td>
</tr>
<tr>
<td>SA 5.b.</td>
<td>Share appropriate Personal Health information with selected and appropriate investigation team members</td>
</tr>
<tr>
<td>SA 6.a.(1)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class IV investigation (for which the individual is the IIC) to commanders</td>
</tr>
<tr>
<td>SA 6.a.(2)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class III investigation (for which the individual is the IIC) to commanders</td>
</tr>
<tr>
<td>SA 6.a.(3)</td>
<td>Release of factual information concerning an ongoing Class II investigation (for which the individual is the IIC) to commanders</td>
</tr>
<tr>
<td>SA 6.a.(4)</td>
<td>Release of factual information concerning an ongoing Class I investigation (for which the individual is the IIC) to commanders</td>
</tr>
<tr>
<td>SA 6.a.(5)</td>
<td>Release of factual information, analysis, findings and cause factors and recommendations concerning an ongoing Class IV investigation (for which the individual is the IIC) to DND/CAF personnel (see Note 1)</td>
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<tr>
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<td>Release of factual information concerning an ongoing investigation (for which the individual is the IIC) to NOK</td>
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<td>Release of factual information, analysis, findings and cause factors and recommendations concerning a completed Class III &amp; IV investigation to the public through ATI</td>
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</table>

Note 1: This authority includes the release of this information to DND contractors (such as OEMs or AMO as required).
## ANNEX C - RETAINED AUTHORITIES

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<tr>
<td>RA 1.a</td>
<td>Conduct interviews with persons summoned by BOI under section 6.3 of the Aeronautics Act (as per the MND delegation indicated in the AIA’s CDS Delegation Order)</td>
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<tr>
<td>RA 2</td>
<td>Seize, Search and Test to Destruction</td>
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<tr>
<td>RA 2.a</td>
<td>Seize, search and test (possibly to destruction) articles belonging to civilians and who will not give their permission to do so (see Note 1)</td>
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<tr>
<td>RA 2.b</td>
<td>Release items from impound (see Note 2)</td>
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<td>RA 2.c</td>
<td>Release items from quarantine (see Note 2)</td>
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Release of analysis, findings and cause factors and recommendations concerning a completed Class II investigation to the public through ATI

RA 6.b.(9)  
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RA 6.b.(10)  
Release of factual information or analysis, findings and cause factors and recommendations concerning a completed investigation to other investigating agencies (coroner, police, NIS, summary investigation, BOI, etc)

Note 1: Seize, search and test protocols are dependent upon the origin of the articles in question and may need to be treated differently or uniquely depending on that situation. The AIA retains this authority for all situations where civilian personnel are involved and do not give their permission for the requested process (search, impounding, quarantine or test) so that appropriate protocols are used in consultation with TAA, OAA and other Authorities (such as TC, TSB Canada, FAA or NTSB (USA) etc). As well, the powers delegated to the AIA to conduct a BOI under section 6.3 of the Aeronautics Act may become the source of authority for such activities.

Note 2: Processes to be followed and delegated authorities are detailed in the A-GA-135-001/AA-001 (Chapter 8).

Note 3: No person exercising the AIA’s delegated authority may restrict access to non-DND sites. However, due diligence requires that warning of known hazardous conditions is given to the public or any other person wishing to access an investigation site. Failure to heed such warnings should be recorded and the persons should be observed (under close escort if possible). Also, aid to enforce access restriction should be sought from authorities that have the power to so restrict access (see detailed processes in the A-GA-135-001/AA-001 (Chapter 8) and A-GA-135-002/AA-001).

Note 4: Personal Health Information is discussed in detail in Chapter 6, paragraphs 15-17. It is essential that this information is reviewed and understood before any release of personal health information is made.

Note 5: The release of this information includes release to DND contractors (such as OEMs or AMOs as required).
ANNEX D – SAMPLE FSIR TASKING MESSAGE

On 8 Sep 13, an Air Cadet glider operating out of Langley, BC, landed on the flat roof of a convenience store, 1/2 mile west of the airport. The aircraft wings and fuselage were damaged and the pilot incurred minor injuries.

Le 8 Sep 13, un planeur des cadets de l’air opérant à partir de Langley, BC, a atterri sur le toit plat d’un dépanneur, 1/2 mile à l’ouest de l’aéroport. Les ailes de l’avion et du fuselage ont été endommagés et le pilote a été blessé.

Ref: A. Telecon Capt White LMFV Wing FSO/ Maj Regnier DFS 2-7, 8 Sep 13
B. FSOMS 157879
C. A-GA-135-001/AA-001
D. A-GA-135-003/AA-001

Subject: Flight Safety Investigation (FSI) Tasking Order – C-GCLB

1. A Class I Fight Safety Investigation (FSI) shall convene at Langly, BC, no later than 9 Sep 13, or as directed by the Investigator-in-Charge, to investigate the circumstances involving glider C-GCLB on 8 Sep 13, refs A and B.

2. The investigation team is as follows:
   A. Investigator-in-Charge (IIC): Maj K Smith, 19 Wg WFSO, 250-339-8211 x8227, CSN 252-8227; and
   B. Investigator: Capt J White, LMFV Wing FSO, 604-306-9937.

3. The investigation team is to coordinate their own travel arrangements to Langley, BC, keeping the IIC informed.

4. The purpose of the FSI is to determine all factors that contributed to the occurrence, determine the final cause(s) and recommend safety preventive measures. With the exception of specified documentary evidence, no evidence gathered during the conduct of an FSI may be used for any purpose other than Flight Safety. The confidentiality of this evidence is expressed in Refs C and D, the Aeronautics Act and the CTAISB Act. The FSI shall remain convened until released by DFS.

5. The FSI proceedings shall be reported using the format for a Flight Safety Investigation Report, per ref C. The report will be classified with the appropriate security level.

6. The IIC will issue regular sitreps on the investigation to DFS for onward transmission as determined by DFS.

7. If during the conduct of the investigation it is learned that a claim by or against the Crown is likely, the IIC shall immediately inform the CO RCSU (Pac).

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8. If during the conduct of the investigation the IIC becomes aware of circumstances that suggest a collateral investigation is required, he is to immediately advise DFS before informing the CO RCSU (Pac). The IIC shall not give evidence as to what circumstances brought about this determination, per ref D.

9. Media requests are to be coordinated through RCSU(Pac) PA.

10. Travel expenses to be charged to CC 34927A, FC 3373AC, Fund L101, GL 2106, IO TBD. Forward copies of all finalized claims to the DFS SO Coord, Therese Landry, ASAP.

End of English text/debut du texte français.

réfs:  
A. Téléconférence Capt White, OSV LMFV Ere / Maj Regnier, DSV 2-7, 8 sep 13  
B. FSOMS 157879  
C. A-GA-135-001/AA-001  
D. A-GA-135-003/AA-001

Objet: Ordre de mission pour l'enquête de la sécurité des vols – Planeur C-GCLB

1. Une enquête de sécurité des vol (ESV) de classe I sera convoquée à la Langley, BC, au plus tard le 9 sep 13, ou comme dirigé par l'enquêteur désigné, pour examiner les circonstances de l'accident impliquant le planeur C-GCLB qui a eu lieu le 8 sep 13, réfs A et B.

2. L’équipe de l’ESV sera composée des personnes suivantes:

A. L’enquêteur désigné (ED) de la DSV: Maj K Smith, OSV 19e Ere, 250-339-8211 x8227; et  
B. Enquêteur de la DSV: Capt J White, OSV LMFV Ere, 604-306-9937.

3. L’équipe de l’ESV doivent coordonner leur propre transport à Langley, BC, en gardant l'ED informé.

4. Le but de l’enquête est de déterminer toutes les circonstances entourant l’événement, d'assigner les causes et de recommander des mesures préventives relatives à la sécurité. À l'exception de preuves documentaires spécifiques, aucune information recueillie durant la conduite de cette ESV ne peut être utilisée pour un but autre que la sécurité des vols. La confidentialité de l’information amassée est stipulée dans les réfs C et D, la loi sur l’aéronautique et la loi du bureau canadien d’enquête sur les accidents de transport et de la Sécurité dans les transports. L’ESV restera sur place jusqu’à nouvel ordre du DSV.

5. Les conclusions de l’ESV seront rédigées selon le modèle d’un rapport d’enquête des sécurité des vols, réf C. Le rapport sera classé selon le niveau de sécurité approprié.

6. L’ED fournira des SITREP au QGDN/DSV régulièrement pour distribution, au besoin, à la chaine de commandement.

7. Si, pendant la conduite de l'enquête, on s’aperçoit que l'accident peut donner lieu à une réclamation par ou contre la couronne, l'ED doit en aviser immédiatement le commandant du RCSU (Pac).

8. Si, dans le cadre de son enquête de SV, le ED est mis au courant de faits exigeant une enquête parallèle, il doit informer immédiatement le DSV. Suite a cette discussion, le ED doit informer le commandant l'URSC (Pac). L’OSV se limitera à suggérer la conduite d’une enquête parallèle et ne doit pas fournir les motifs qui l’ont amené à cette conclusion, réf D.

10. Les dépenses de voyage doivent être portées au compte CC 34927A, FC 3373AC, Fund L101, GL 2106, IO TBD. Faire parvenir les copies finales de toutes réclamations au QGDN/DSV OEM COORD, Mme Thérèse Landry, DQP.

S. Charpentier
Colonel
DFS
CHAPTER 7 - NEXT OF KIN

INTRODUCTION

1. When personnel are fatally injured in an occurrence, the NOK expect appropriate treatment and release of information concerning their loved ones. To aid in this, DFS has adopted a process whereby the NOK are briefed on the accident investigation process and the contents of some DFS investigation documents prior to their public release.

2. There are two slightly different categories of NOK:
   a. those immediately related to crew members or personnel directly employed in the operations of the aviation asset (such as aircrew, maintenance personnel or SAR spotters); and
   b. those related to personnel who were killed collaterally or that were killed in the occurrence but were not directly connected to the operation of the aviation asset (such as persons on the ground, non-crew parachutists or passengers).

3. The first group of NOK have a vital role in the successful investigation of an occurrence, particularly from a Human Factors perspective since they may be the sole source of information that could help determine cause of an accident. The first group is usually interviewed by the Medical Member and the Human Factor specialist during the initial information gathering stage of the investigation; they may be consulted later during the analysis stage. The second group may also provide key insight on the occurrence upon interview by the Operations Specialist, for example. Both NOK groups have the requirement for just treatment and the expectation that a professional and thorough investigation will be conducted and that appropriate information will be forthcoming when available. Beyond the information that is part of the initial briefing, all NOK should be given an investigation Point of Contact (POC) so that they may make inquiries as they require.

NOK BRIEFING INTENT

4. There are two official briefings presented by DFS to both groups of NOK, the Initial and Final Briefings. The intent of these briefings is to keep the NOK informed about the investigation process and status, identify an investigation POC, and to help them prepare for the eventual public release of the FTI, Epilogue, and FSIR. The briefings must be tailored to the audience, particularly when discussing complex aviation systems or situations, and be presented in as sensitive a manner as possible. It is important that the audience understands the material so information should be presented in a manner that they can understand or question areas that may not be clear to them.
INITIAL BRIEFING

5. The purpose of the initial briefing is to describe in detail the investigation and FSIR processes and to provide the NOK with an advance copy of the FTI information prior to its official public release on the DFS Website. This briefing will take place after the CDS and the MND have been informed or briefed on the FTI.

6. DFS, DFS 2, or his designate will provide this briefing in person. The briefing will describe the role of investigation team in general, explaining the various specialists or groups involved. It may be of value to identify that other investigative processes might occur, such as a Board of Inquiry, and engage the NOK. More importantly, though, the point should be made that there is no relationship between the FSI and other investigations other than to pass strictly factual information. This briefing will also identify the FSI POC and explain the difference in role from the Assisting Officer; the FSI POC will update NOK regarding the stages of the FSI and explain any delays encountered in the normal investigation timelines.

7. Briefings will be coordinated with the affected Wing, particularly with respect to administration and attendance. Normally, the designated Assisting Officer and the padre would be present as the Wing’s representatives, but this may vary according to the wishes of the NOK. After describing the FSIR process and associated documents, details of the FTI will be presented. Information relating to on-going analysis or hypothesises about the investigation shall not be released. The NOK should be left with a copy of the FTI and a copy of the investigation process summary, which, upon request by the NOK, may be forwarded under DFS cover letter to other family members.

8. The administrative details for this briefing should follow the considerations listed in DFS Standard Operating Procedures (SOPs).

FINAL BRIEFING

9. The purpose of this briefing is to provide the NOK and survivors with a briefing on the results of the FSI prior to the public release of the final FSIR and Epilogue. In circumstances where the results might be controversial, it is recommended that NOK and surviving crewmembers be briefed independently, unless requested differently by those involved. Coordination with Wing and Unit commanders and their advisors is essential to meeting the aim of the briefings while minimizing stress on the NOK and survivors. This briefing will contain:

   a. a summary of the factual data;

   b. a summary of the analysis;

   c. the findings and causes as determined by the investigation; and
d. a summary of the recommendations made by the investigation.

10. The main briefer shall normally be the IIC. In addition, a suitably qualified individual (such as an IIC 1, the SI, DFS 2, or DFS) shall attend to address any questions related to the FSIR process, policy or legislative aspects of the CTAISB and/or Aeronautics Act. In preparing and presenting the briefing, the main briefer must bear in mind that the NOK may not be familiar with aeronautical terms or acronyms. Therefore, it must be presented in easily understood, layman's terms. The briefer must also bear in mind that the objective of the briefing is to explain the findings of the investigation, not to defend the findings.

11. This is a very emotional event for the NOK. They should therefore be asked if they would like to have either a military or civilian padre present at the debriefing. Normally, the designated Assisting Officer and a padre would be present on behalf of the Wing during the NOK briefing. Nonetheless, the wishes of the NOK as to the presence of supporting personnel, relatives or friends need to be considered, and where possible, respected.

12. The NOK should be left with a hard copy of the FSIR and a hard copy of the briefing. Soft copies shall not be distributed until after the public release of the FSIR and then only if specifically requested.

13. Following the briefing, the NOK should be advised when the FSIR will be made public. Normally two weeks should be allowed between NOK debrief and release of the FSIR to the public. However, NOK requests for delay of the FSIR publication will be considered by DFS.

14. Administrative and financial details for these briefings are contained in DFS SOPs. In general, a relaxed atmosphere, a free and open question format should be sought and sufficient time must be allotted for the briefs. As well, the briefing will not contain detailed medical information; pictures of the deceased or autopsy photographs (i.e. no shocking pictures or information will be presented).
CHAPTER 8 - COLLATERAL INVESTIGATIONS

INTRODUCTION

1. Serious aviation occurrences often result in the initiation of not only airworthiness investigations, but also concurrently other investigations by the chain of command. These investigations all have different objectives and processes and are subject to different laws and regulations. Moreover, each investigation has an important role to fulfill and airworthiness investigators must respect this fact.

2. There are several problems associated with this situation. First of all, there is only one set of physical evidence associated with an occurrence. Therefore, ways must be found to ensure that the examination and analysis of this evidence is conducted properly and safely by qualified individuals. Furthermore, much of the information that can be derived from this physical evidence is time-sensitive and, therefore, the examinations must take place in a timely manner. Finally, there is only one set of witnesses and participants. The CTAISB Act sections that apply to the MND specifically preclude the sharing of “privileged” information, such as witness statements and on board recordings, with other investigations except under very specific conditions. As can be seen, there are several challenges associated with the passage of appropriate information between investigations.

3. The objective of this chapter is to outline how airworthiness investigations will deal with collateral investigations.

TYPES OF INVESTIGATIONS

4. There are eight types of investigation with which an airworthiness investigation may be asked to share information. These are as follows:

   a. a Royal Commission convened under the Inquiries Act;

   b. a Coroner’s Inquiry;

   c. a police investigation;

   d. a BOI or a Summary Investigation;

   e. a foreign government investigation (possibly due to the location of the occurrence);

   f. an investigation by another airworthiness authority (such as TSB, NTSB, TC or another military aviation safety organization);

   g. an airworthiness technical assessment; or
h. any other official inquiry looking for access to investigation material.

5. **Royal Commission.** A Royal Commission convened under the *Inquiries Act* is relatively rare and is usually an investigation that has precedence and both extraordinary investigation powers and access to evidence. Normally, this type of investigation takes a while to initiate and so time should not be a factor. Therefore, if such an investigation is convened, the AIA will normally seek legal advice from the CAF Legal Adviser as to what information can be passed to this investigation.

6. **Coroner’s Inquiry.** A Coroner’s Inquiry has very broad legal powers. For example, a Coroner’s Inquiry must be provided “privileged” information if it is requested. All information provided to a Coroner’s Inquiry will be released through the AIA. When this situation arises, the AIA will seek legal advice well, so that privileged information is only released as required by law and its use will be known or followed by AIA staff. Note, this applies to Canadian Coroners only; foreign Coroners do not have jurisdiction in Canada and these provisions, therefore, do not apply (see para 13).

7. **Police Investigations.** A police investigation is normally conducted for serious aircraft occurrences, such as a category “A” occurrence, or associated with acts of malfeasance such as sabotage or vandalism. These investigations can be conducted by local or provincial police forces, the RCMP or the CAF National Investigation Service. The main focus of these investigations is to determine if there was any wrongdoing that could result in criminal charges. Given the different objective of this type of investigation from an airworthiness investigation, there is seldom any interaction between the two investigations. However, it is important to note that the CVR or other types of recordings are afforded privilege and their release is prescribed under the *CTAISB Act.* Also, there’s privilege associated with statements and interviews given to a safety officer so these things must be respected when interfacing with a police investigation. Finally, it is a good idea for FS personnel and qualified technical personnel to monitor such investigations so that shared evidence is preserved and aircraft or other aviation resources damage is minimized.

8. **Board of Inquiry or Summary Investigation.** A BOI or a Summary Investigation (SI) is the most common type of collateral investigation with which an airworthiness investigation interacts. The BOI or SI convening order can require findings to be made that closely mirror those of an airworthiness investigation. However, the BOI and SI are dramatically different from an airworthiness investigation. The most significant differences are as follows:

   a. a BOI and an SI are convened under the *NDA* whereas an airworthiness investigation is convened under the *Aeronautics Act* and the *CTAISB Act;*
b. a BOI or an SI is convened by the CoC and is responsive to CoC objectives, timelines and review whereas an airworthiness investigation is convened by the AIA, who is independent from the CoC; and

c. a BOI or an SI are administrative in nature and must make multiple findings whereas the sole purpose of an airworthiness investigation is to identify effective PMs that will either prevent or reduce the risk of a similar occurrence.

9. In dealing with BOIs and SIs, the following principles will be used:

a. the investigations will be kept separate to the maximum extent possible;

b. the Chairperson of the BOI or SI should be directed to contact the AIA’s Chief Investigator (DFS 2) prior to any FSI interaction with either the BOI or the SI. The AIA’s Chief Investigator will outline to the Chairperson the information that can and cannot be passed by the AIA to the BOI or the SI;

c. the airworthiness investigation will normally provide the BOI or the SI with factual information and a statement of cause (if known) only. If possible, Part 1 of the Preliminary Report will be provided to the BOI or SI;

d. all information provided to the BOI or SI shall only be released by the AIA or his designate IAW Chapter 6 AIA authorizations; and

e. the AIA will identify, to the best of their knowledge, any legislation, orders or policy that should be brought to the recipients attention concerning the information’s use and privilege that may effect further distribution or preclude disclosure (such as CTAISB, Privacy or other ATI Act provisions, ACOs etc).

10. Factual information includes the following information:

a. general information such as the aircraft type, aircraft role, unit of ownership and number of crew;

b. history of the flight including the type of mission, aerodrome of departure and location of the occurrence;

c. a summary of injuries to personnel including the number of fatalities, critically injured and major injuries to crew, passengers and others. Names are not to be used and crew members will be referred to by their crew position (e.g. pilot, co-pilot, flight engineer etc);
d. damage to the aircraft;

e. aircraft salvage and any environmental damage;

f. a summary of the personal information of individuals involved in the occurrence including crew position, rank, qualifications, medical expiry date, total flying time, total flying time on type, flying hours in the last 30 days, duty hours during the last 24 hours, flying hours during the last 24 hours and flying hours on the day of occurrence. Names are not to be used and crew members will be referred to by their crew position (e.g. pilot, co-pilot, flight engineer etc);

g. aircraft information including any significant aircraft maintenance information;

h. meteorological information;

i. pertinent information with respect to aids to navigation

j. pertinent information with respect to communications equipment;

k. aerodrome or alighting area information;

l. general information regarding flight recorders such as the type of recorders (CVR/FDR). In no case will specific information on cockpit voice recorders or video recordings of crew reactions be included;

m. wreckage and impact information;

n. general medical information;

o. fire, explosive devices and munitions information that is not classified;

p. survival aspects of the occurrence;

q. test and research activities but excluding any analysis from these activities;

r. organization and management information pertinent to the occurrence;

s. flight data recorder data;

t. pictures of the occurrence (still and video); and

u. pictures of the occurrence site other than those depicting human remains and/or injuries to personnel.
11. Foreign Government Investigation. Should a DND/CAF aircraft crash in a foreign country, usually a STANAG or similar agreement will take effect and the AIA will investigate the accident as per normal procedures but within the laws of the foreign government. However, not all situations will be covered by such agreements and in cases where no agreement exists, the AIA through the CAF CoC will attempt to get concordance with the government in question to try and proceed in the normal manner. Should that not be possible due to the laws of the foreign government, the AIA will attempt to gain DND/CAF presence in the investigation and will attempt to get the protections that would be present if the accident happened in Canada or a negotiated STANAG location. The next DND/CAF perspective will be to try and behave as if ICAO agreement applied to the accident. Regardless, the laws of a foreign government will be fully respected and cooperation to the extent possible will be offered.

12. Sharing information with another airworthiness authority or aviation safety investigation of a foreign military is covered in Chapter 9.

13. Other Official Inquiry. Occasionally an inquiry may arise that does not fit into any of the previously mentioned categories. Under such circumstances the AIA will make decisions for release of information such that the integrity of the statutory privileges and the FS system are maintained. Typically, factual information may be released should the FS investigation be completed; however, the AIA will retain the authority for release of information to such inquiries.

INVESTIGATION PRECEDENCE

14. At each occurrence site, there is an order of precedence for the authorities charged to investigate the occurrence. When there has been a fatality, the Coroner has precedence over all other investigations. Because of this precedence and from the due diligence perspective, AIA representatives, such as on-scene FS personnel, shall make all data regarding hazards associated with aircraft crashes known to the Coroner or their representatives. This will include but not be limited to, aircraft component hazard data sheets, cargo hazard lists, WHIMIS data and any other information sources available. Occasionally the Coroner may wish to have an inquiry based upon “Public Safety” issues, but these typically arise at times well after the accident and the field phase of the AIA investigation may have already been completed. Once the Coroner has released the site for investigation or with no fatality involved, a crash site is usually considered a “crime scene” due to the value associated with the loss of an aircraft or damage on the ground, thus making the police investigation next in the order of precedence. This usually suits the AIA’s objectives because the police use their powers and resources to cordon the scene and restrict access, even from property owners. However, police rarely follow-up the crime scene activity with additional investigation and, once it is established that no evidence of criminal activity exists, the airworthiness investigation is generally allowed the next order of precedence.
CHAPTER 9 - AIA/TSB AND OTHER COORDINATED INVESTIGATIONS

INTRODUCTION

1. The CTAISB Act contains provision for coordinated AIA/TSB occurrence investigations when both a “Military Conveyance” and some sort of Canadian civilian facility or aviation resource is involved. There is a detailed working arrangement in place to explain the way that such investigation should take place but this chapter outlines the general principles for such circumstances. This AIA/TSB agreement parallels the ICAO Annex 13 investigation standards and cooperation principles.

2. In general, the principles of this cooperation will be extended in like circumstances for situations where joint investigation is called for but no formal agreement has been reached. This refers to investigations when other military safety investigation bodies are involved with a DND/CAF aviation resource but neither a STANAG nor other agreement has been signed. Similarly, for situations where a DND/CAF aviation resource is involved in a foreign country and that country is required or wishes to investigate an occurrence, the principles of cooperation in this chapter will guide the actions of DND/CAF airworthiness investigators.

3. When the AIA is involved with investigations with other NATO nations, STANAG 3531 governs the investigation process. Similarly, other agreements exist with some allied forces, like the Air and Space Interoperability Council (ASIC) Air Standard 85/2A that applies to Canada, Australia, New Zealand, the UK, and the US.

NOTIFICATION FOR COORDINATED INVESTIGATIONS

4. Recognising that prompt and efficient occurrence notification is a key element in an effective investigation, the signatories to an agreement will notify each other immediately when they become aware of an aviation occurrence that could result in a coordinated investigation. Signatories may also inform each other regarding an occurrence that has the potential to advance FS even though they may not fall under the provisions of Section 18 of the CTAISB Act. Signatories will pass information on reported occurrences on a routine basis.

PURPOSE OF INVESTIGATIONS

5. Coordinated investigations neither assign fault nor determine civil or criminal responsibility, but rather advance aviation safety. This principle, already well-established in Canadian aviation safety organizations, will be used to guide coordinated investigations where no agreement is in place; this is also found in ICAO guidelines for aviation safety investigations, which may be useful in setting up general guidelines in cases when none exist.
6. Some coordinated investigation situations with other airworthiness authorities (such as TC) could lead to enforcement action by the authority and, in cases such as this, the sharing of information can be quite complicated. To guard the investigation principle of not “assigning fault” in AIA/TSB investigations, only the factual information may be shared with enforcement agencies; however, no portion of the investigation that uses privileged information (such as analysis) can be shared with enforcement authorities without specific AIA permission and concurrence (see paras 11-14 below).

PROCEDURES

7. The TSB investigation of an aviation occurrence will be conducted IAW the CTAISB Act, the TSB Manual of Investigations (Air) (MOI (Air) 2-4) and the TSB (Air) Major Occurrence Investigation Checklist. The AIA’s investigation of an aviation occurrence will be conducted IAW the Canadian Aeronautics Act, the CTAISB Act, the A-GA-135-001 - Flight Safety for the Canadian Armed Forces, and this Airworthiness Investigation Manual.

8. In cases where no coordinated investigation agreement exists, the lead organization will likely wish to use their procedures manual as the basis for the investigation. DND/CAF investigators should try to assess the procedures manual in question to determine if there is some procedure in place that is contrary to AIA procedures, particularly for privileged information (CVR, witness statements or submissions to the investigation), release of information and the use of final investigation information or recommendations. Should this assessment identify diametrically opposed purposes to DND/CAF norms or should the possibility of compromise for the position or reputation of the CAF FS system exist, the AIA must be notified and a means plotted to avert such circumstance.

COORDINATION

9. Within Canada, the coordinated investigation team will be comprised of both TSB and DND/CAF participants. The team lead, IIC, will be from either TSB or DFS IAW the DND-TSB Working Arrangement. The agency with the member status will appoint a main POC for its personnel. A similar arrangement will be arrived upon when an investigation is required and no agreement exists.

NATIONAL SECURITY COMPROMISE

10. In cases where elements of the investigation of an aviation occurrence could, in the opinion of DND/CAF (as per Chapter 3, para 2), compromise national security and the required security clearance is not held by the assigned TSB investigators, the AIA will conduct an investigation of those elements and will advise TSB, in writing, of the specific reasons for this classification. To the extent that there is no threat to national security, DND/CAF will inform TSB of any findings and causes, including safety deficiencies identified in its
investigation of security sensitive elements contributing to the aviation occurrence.

**SHARING OF COORDINATED INVESTIGATION INFORMATION**

11. Investigation information, including privileged information, obtained by one of the participants will be made available to the other participant’s investigators without undue delay. Except as required by law, no information obtained from DND/CAF or TSB will be released without the mutual consent of DND/CAF and TSB.

12. Release of statement information will be IAW the *CTAISB Act* article 30. On-board recordings, flight data recordings, event recordings, and communication records from coordinated investigations will be made available to the other participant, subject to protection of privileged information as per *CTAISB Act* article 28 and 29 and the requirements of national security in relation to the MND as per *CTAISB Act* article 24 (7).

13. If a coordinated investigation takes place with an agency where no agreement exists, the DND/CAF investigators will attempt to determine if shared information can be offered the protection that applies in Canadian law. Should such protection be evident, then information will be shared in the above manner. If that is not the case, then the AIA will seek legal counsel regarding sharing of information, with the view to having a legally binding agreement signed by the foreign party, which will ensure information protection and privilege.

14. When the investigation is conducted under foreign law that does not recognize the privileges associated with this information, the AIA (through the DND/CAF lead investigator, legal counsel and foreign liaison) will make that fact known and seek such privilege. Again, if this is not forthcoming, the AIA will make a decision regarding AIA participation in the investigation with respect to harm possibly done to the CAF FS system should such privilege not be offered.

**LEGAL ORDER FOR SUBMISSION OF PRIVILEGED INFORMATION**

15. Where one participant is served with a legal order for production of privileged information or where it otherwise intends to release it as required by law, the other participant will immediately be notified so that it may, prior to any surrender of that information, have a reasonable opportunity to make representations to the appropriate court or other authority.

**SUPPORT**

16. Cost sharing, transportation sharing and mutual training details are contained in the DND-TSB Working Arrangement. Essentially, extra costs brought on as a result of the other participant’s needs must be borne by that participant. Similarly, while transportation is shared, incremental costs are borne by the participant that incurs those costs. Finally, each participant agrees that
should training opportunities arise, the participants agree to allow each other to benefit from the situation. These principles will be used to guide situations when DND/CAF investigators are involved in multi-participant investigations where no agreement exists.

NOTIFICATION OF SAFETY DEFICIENCIES REQUIRING IMMEDIATE CORRECTIVE ACTION

17. Should a safety concern requiring prompt corrective action be identified by either participant, the other participant will be notified immediately. The participant responsible for recommending corrective actions will advise the other participant of the recommendations made and of the corrective action taken, or planned to be taken, by the agency responsible. This allows each participant to retain its independence to take safety measures in an expeditious manner while respecting other participant’s need to be aware because there is no requirement to negotiate a broad safety action with all participants that could entail lengthier response times.

EVIDENCE DISPOSAL

18. If required, wreckage, things and other releasable information will be returned to the owner once the participants have mutually determined that there no longer is a requirement for their retention.

REPORTS

19. The DND-TSB Working Arrangement contains details on review of reports, both at the draft and final stages. The arrangement calls for circulation, return of comments and appropriate amendments of reports prior to final release to the public. Of note, the arrangement calls for notification of safety recommendations that are directed to Other Government Departments (OGDs) such as TC or, in the case of TSB-led investigations, to the MND. This notification is aimed at providing advance notice of these safety recommendations to OGDs as provided for in the CTA/TSB Act (subsection 24(6)).

ACCESS TO OCCURRENCE SITES AND OTHER EVIDENCE

20. The participants recognize each other’s investigators’ authority in controlling access to occurrence sites, evidence and documentation IAW the legislation governing both participants’ activities respectively. Generally, this means that the local police authority (at the federal, provincial, or municipal levels) will have the task of providing security to occurrence sites not identified as military transportation facilities. For occurrence sites at military facilities, the CAF Military Police or designated military personnel will provide site security.

AVIATION OCCURRENCES INVOLVING A TSB EMPLOYEE

21. A detailed process is identified in the DND-TSB Working Arrangement for situations where a TSB employee is involved in an aviation occurrence. The
TSB may, to avoid potential conflict of interest, delegate DFS to conduct the investigation of the transportation occurrence on its behalf. The arrangement calls on DFS to use its procedures and a slightly modified review process where TSB releases the final investigation to the public, though the report can only be altered by DND/CAF authorities. TSB assumes all costs for such investigations.

**EXCHANGE OF TECHNICAL INFORMATION**

22. The participants will, on a regular basis, exchange information on current and new investigative technology and procedures, which may be implemented by either participant. Both participants will provide information from each other’s safety databases for aviation safety investigation purposes.

**PRESS RELEASE**

23. Public release of accident investigation information will be coordinated in advance by the lead participant with the member participant. The final authority for release of public information will rest with the lead participant.

**AGREEMENT MODIFICATION AND REVIEW**

24. Any dispute regarding the interpretation or implementation of the arrangement will be settled only by consultation between the participants; it will not be referred to a national tribunal or any other third party for settlement.

25. At least once a year, preferably in the first quarter of the calendar year, the appropriate staffs of both participants will meet to discuss their working relationship, investigations in progress and the need to amend the arrangement.

26. Either participant may propose to change to the arrangement at any time; amendments may be consented to in writing.

**TERMINATION**

27. Either participant may terminate the DND-TSB Working Arrangement on three months written notice to the other participant. The arrangement may be terminated at any time with the mutual written consent of both participants.
CHAPTER 10 - HAZARD CONTROL PROCEDURES AND EQUIPMENT

INTRODUCTION

1. This chapter is designed to be utilized by the IIC and all AIA representatives and FSI team members in conjunction with the A-GA-135-002/AA-001, Occurrence Investigation Techniques for the Canadian Armed Forces, and in particular with Chapter 11 of that manual. The A-GA-135-002/AA-001 is a very detailed technical manual that deals with the techniques and procedures used by DND/CAF investigators; although not on wide distribution, it is readily available from DFS or local WFSOs. Of note, much of the content of Chapter 11 of that manual has been obtained from a similar document published by TSB.

2. Occurrence scenes are dangerous not only due to the presence of biological hazards (biohazards) like blood-borne pathogens, but also due to armament, ejection seats, caustic or otherwise dangerous liquids (such as hydrazine, otto-fuel, liquids carried as cargo, aviation fuel and lubricants etc), fire, smoke, LOX, pressurized containers, damaged and inflated tires, jagged metals, carbon fibres, radiation from aircraft instrumentation or other aircraft components, and other substances that can harm personnel. The personal protective equipment (PPE) supplied to occurrence responders and AIA investigators is primarily designed to offer protection from some of these hazards (airborne particulates, biological agents and some puncture protection) but in no way is protection against all hazards assured. With this in focus, it is essential that constant awareness of hazard possibilities be undertaken by site managers and prudent action to avoid harm be taken on a constant basis. When unknown hazards are encountered, expert advice shall always be sought to avoid further damage to property or exposure to personnel on the scene.

3. Chapter 11 of the A-GA-135-002/AA-001, Occurrence Investigation Techniques for the Canadian Armed Forces, details a biohazard exposure control plan, which must be available and consulted whenever human remains are present on an occurrence site. In addition to the bodies of the deceased, an accident site may contain liquid, semi-liquid and dried blood, other bodily fluids, and fragmented and otherwise unrecognizable bone, tissue and internal organs. Any of these substances could present pathogen dangers and proper precautions are essential.

4. Many of the techniques and principles discussed in Chapter 11 of the A-GA-135-002/AA-001 and in the following paragraphs can be applied to other hazards encountered on an occurrence site. For example, the access control precautions utilized to minimize exposure to personnel for a biohazard can be similarly used to avoid exposure to a hazardous liquid or an unsafe ejection seat on scene. Therefore, the principles within the biohazard exposure control plan
should also be utilized to minimize exposure to all hazards on the occurrence scene.

UNIVERSAL PRECAUTIONS

5. Vaccinations have long proven to be effective in combating infections; however, at an accident site, additional measures must be taken to further reduce the likelihood of infection or the spread of the pathogens. The medical profession and health care agencies, in their approach to precaution against infection, have adopted a concept of universal precaution. This concept, which has been widely adopted by other investigative agencies, has been accepted by DFS (the AIA) as one of the cornerstones of its biohazard exposure control plan.

6. Universal precaution is simply an approach to infection control and can be used for exposure to other hazard types as well. When applied to aviation accident investigations, this approach requires that investigators treat all human blood and body fluids as if they contained blood-borne pathogens. In addition, since it is not possible to readily identify blood and other co-mingled contaminated body fluids at an accident site, it is prudent to take universal precautions while working around and inside the wreckage and while handling the wreckage at the site or while performing offsite examinations. Similar protocols will be effective in the reduction of exposure risks for other type hazards too.

7. Universal precautions require investigators to take measures to protect themselves by preplanning prior to undertaking investigation tasks. Once involved in investigative activities, universal precautions require that investigators apply engineering controls that isolate or remove the blood borne pathogen hazard (and other hazard types). Finally, universal precautions require that investigators adopt work practices that reduce the likelihood of exposure by altering the manner in which investigative tasks are performed. Due to the unique nature of each accident site, universal precautions must, of necessity, be tailored by the investigator to meet the individual circumstances.

8. As part of the investigator’s preplanning process, universal precautions, as a minimum, includes the following:

   a. appropriate inoculations;
   b. training on biohazards (and other hazard types) associated with on-site and off-site examinations of evidence;
   c. using procedures on the identification and control of a biohazard (or other hazard type) site;
   d. selection, use and donning of personal PPE;
   e. proper removal and disposal of contaminated PPE;
f. understand work practices designed to minimize exposure;

g. using procedures for decontaminating investigative equipment and evidence;

h. using the procedures for shipment of contaminated evidence to off-site examination facilities; and

i. using appropriate procedures for an exposure incident.

IMPLEMENTATION AND MANAGEMENT

9. The details on implementing these necessary universal precaution items during an investigation are contained in the A-GA-135-002/AA-001. It is nonetheless essential that the investigation team lead by example at occurrence sites. This means that the IIC shall brief all personnel that could be exposed to such hazards, determine who is appropriately trained to handle the hazards, and constantly be vigilant regarding the hazard potential for any personnel associated with the occurrence investigation. By necessity there will be several and perhaps many personnel involved in the investigation of an occurrence that will have absolutely no training or knowledge regarding these types of hazards. Under such circumstances, it is very important for the AIA members of the investigation to demonstrate the correct behaviours around all of the hazards at an occurrence site so that untrained personnel can emulate the correct behaviour they observe by the professional investigators.

10. In a similar vein, the IIC and investigation team members should be alert for concerns raised by untrained personnel on the scene or observations from other experts, such as salvage officers, armament technicians, environmental officers or OSCAR personnel. Any of these personnel may have valid and actionable information that could minimize the hazard exposure risks and so all points should be considered as the site plan is put in place and amended on a daily basis.

11. Record keeping of exposure to occurrence site hazards is required, even if proper procedures are followed throughout the investigation. This protects individuals from the consequences of exposure to unknown hazards and possible associated health problem at a later date as the record will be traceable and might help with diagnosis and treatment. Also, the record may be of value from a pension implication perspective.

EQUIPMENT

12. AIA investigators generally should arrive at an accident scene with appropriate PPE for the first few days. This typically will be one “A” kit and two “B” kits with supplemental equipment such as heavy duty and usage particulate masks and filters. The IIC should attempt to determine the extent of the hazards at the occurrence site and then request supplemental supply through local
suppliers or, if necessary, through DFS. Also, health protection kits are
prepositioned at various locations in Canada. Requests for these kits to be made
available should be processed as soon as the possibility of their use is
anticipated. Full details on practices, procedures and kit contents can be found
in the A-GA-135-002/002, which should be continually consulted during any
situation where hazards are encountered. Of note, it is easy to become
complacent about such hazards since their effect on personnel is usually long
term; therefore, the warnings and briefings must become part of the daily routine
with appropriate updates made as hazards change. Also, climate can be a real
challenge in these situations when heat makes use of the PPE onerous and cold
makes decontamination extremely difficult. The investigation team must deal
with these challenges in a professional manner and seek advice when
unexpected problem arise.
CHAPTER 11 - DND/CAF AIRWORTHINESS PROGRAM MONITORING

INTRODUCTION

1. One of the primary responsibilities of the AIA is to monitor airworthiness activities and functions to ensure they comply with established regulations, standards and orders and to identify any deficiencies in the DND/CAF Airworthiness Program. The AIA is responsible to report this information to the AA.

2. One of the means that the AIA employs to accomplish part of this task is the process of monitoring and annual review of the information that is compiled in support of the Airworthiness Review Board (ARB) and the Airworthiness Advisory Board (AAB). Both of these review actions require that the AIA and the support staff review various aspects of DND/CAF air operations in order to provide input to the boards. Additionally, the AIA his staff provide input to the Annual Airworthiness Report.

3. Of note, the production of these reports does not limit the AIA in the means chosen to monitor the DND/CAF Airworthiness program; it merely documents this particular monitoring action. AIA actions, such as audits, FS surveys, occurrence investigation, issuance of airworthiness investigative clearances and monitoring the risk management process, are but a few of the other means by which the AIA monitors the Airworthiness Program.

ANNUAL AIRWORTHINESS BOARDS

4. An integral part of the oversight requirement is accomplished through the AAB chaired by the AA and the ARB chaired jointly by the OAA and the TAA. The AAB provides a forum at which the AA receives updates on the Airworthiness Program and addresses issues of concern raised by the members. The discussions that take place in the AAB form the basis for the Annual Airworthiness Report from the AA to the CDS and MND concerning the Airworthiness Program. The ARB manages the interface between operational and technical airworthiness of each aircraft type and to confirm the airworthiness status of each fleet on the DND register (and civilian aircraft performing military missions for the DND/CAF). The AIA is a member of both the AAB and the ARB and prepares inputs from the AIA perspective on the Airworthiness Program for both boards.

ARB ANNUAL AIRWORTHINESS REPORT

5. The TAA, the OAA and the AIA prepare Annual Airworthiness Reports (AAR) in support of the ARB process. The AAR outlines airworthiness activities that have occurred during the year as well as airworthiness concerns and their associated mitigation measures on each aircraft fleet in DND/CAF. During the
ARB, each fleet will be reviewed by exception (i.e., only significant, contentious, or unresolved airworthiness issues will be discussed), while ensuring that an adequate level of consideration is conducted before a decision is made regarding the renewal of the Certificate of Military Aircraft Type Certification (CMATC) or Airworthiness Clearance (AC).

6. The objective of the AARs prepared by the AIA is to provide a summary of the significant FS issues that have to be considered for the renewal of the CMATC or AC. AARs (Technical) prepared by the WSMs/AEOs and AARs (Operational) prepared by 1 Cdn Air Div A3 staff normally address the FS issues raised in the AIA AARs. They are forwarded to the AIA for review prior to ARB.

AAB ANNUAL AIRWORTHINESS REPORT

7. The Airworthiness Advisory Board meets at least once per year to advice the AA on the state of the Airworthiness Program and to brief the future plans, accomplishments and milestones achieved in the previous year. In support of this activity, all of the Airworthiness Authorities (OAA, TAA and AIA), the AA support staff and the airworthiness advisors (FTA and AMA) present annual reports and brief the AAB on updates for outstanding airworthiness issues. The AAB is monitored by JAG and other staffs as determined by the AA.

8. The general concept for the AAB is that each airworthiness authority will produce an AAR. The chosen structure for the AAR follows the items of delegation stipulated in the Letter of Delegation to the AA. Under the leadership of the AA, the Airworthiness Coordination Cell (ACC) will collect these reports and, combined with the discussions at the AAB, will produce an executive summary and cover letter for submission to the MND.

RELEASE TO SERVICE AND TEMPORARY AUTHORITY TO OPERATE

9. The Release to Service process is described in the A-GA-005-000/AG-001 as “the backbone of the Airworthiness Program” and is described in detail in ACO 8001-2. It is the formal means by which all operational, investigative and technical issues are reviewed, addressed and documented prior to any operational use of a new or modified aeronautical product.

10. The AIA’s requirements that must be met during the Release to Service process are that any operator, company or unit under consideration for carrying out duties for the DND/CAF must:

   a. understand their FS obligations as listed in the A-GA-135-001/AA-001 (which includes FS Program, reporting and investigation sectors);

   b. be able to fulfill those obligations and have the personnel, structure and appropriate culture in their organization to meet these obligations;

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c. have access to the CAF FS system so that appropriate reports can be made and they can feed/draw information to support the FS Program; and

d. support investigations such that the AIA may carry out his statutory obligations under the Airworthiness Program to independently investigate matters of military aviation safety.

11. When the AIA is satisfied that these requirements are met, an Investigative Airworthiness Clearance will be signed and become part of the Release to Service documentation. A similar process will be carried out by FS and AIA personnel for Temporary Authority to Operate (TAO) processes. The information that is gathered to support these AIA/DFS requirements do not necessarily have to originate with AIA/DFS audits, surveys or visits, but they can be gleaned from the activities of OAA/1 Cdn Air Div and/or TAA/DGAEPDM/DTAES and/or other experts involved in the processes.

12. Also, the AIA will monitor Release to Service and TAO processes with a view to making observations and recommendations based upon safety and airworthiness investigations to ensure appropriate considerations are undertaken during the processes.

INVESTIGATIVE AIRWORTHINESS CLEARANCE

13. The purpose of this section is to provide the requirements associated with the Investigative Airworthiness Clearance (IAC) process. The objective of the IAC process is to provide the DND/CAF airworthiness authorities with the assurance that all of the requirements of the Investigative Airworthiness Program have been assessed and deviations/compliance have been documented. An IAC or Provisional IAC (PIAC) is one of the necessary elements needed to grant an Airworthiness Clearance (or Provisional Airworthiness Clearance) for a new aircraft type.

14. An IAC or PIAC must be completed and signed before a new aircraft type is to be employed in DND/CAF operations.

15. An IAC or PIAC is also required for new fleets operating under a Flight Permit issued by the OAA/TAA; this will ensure that the AIA is ready to investigate FS occurrences on all aircraft flying under DND/CAF airworthiness authority.

16. The AIA requirements that must be met during the Airworthiness Clearance process are detailed at Annex A and can be grouped in two major elements:

   a. FS Investigation and Reporting: This is focused on the ability of the organization to report and investigate occurrences for new DND/CAF-operated aircraft; and
b. Investigation Support: This focuses on the AIA’s ability to investigate in an independent, safe and expedient manner. It ensures all the necessary support/equipment/contacts have been established/coordinated prior to an aviation safety investigation being conducted on behalf of the AIA.

17. In terms of the certification and introduction to service of a new aircraft type, the issuance of an IAC by the AIA is considered to be the culmination or final step of the Investigative Airworthiness Program as it applies to the Airworthiness Clearance of a new aircraft type. A review of the IAC may also occur when a Release To Service (RTS) is deemed required for major upgrade project (especially if it involves changes to the CVR/FDR system or other system, equipment or arrangements that may affect the investigation of occurrences).

RISK MANAGEMENT

18. The Airworthiness Program employs a risk management process to provide a logical and systematic framework to ensure that operational effectiveness is not compromised when situations arise where it may not be possible to maintain pre-established levels of safety. The objective of this process is to enhance military aviation capability through avoiding or mitigating injuries, damage or losses and to ensure that the risk is accepted at the proper level within the command structure.

19. The process is invoked when the level of safety accepted during the airworthiness clearance of an aviation product cannot be maintained. The OAA and/or TAA initiate the process and the AIA is to be kept apprised of all risks identified as being in excess of an “Acceptable Level of Safety” (ALOS). Risk that cannot be reduced to the acceptable level must be assumed/accepted at the appropriate level in the CoC. Risks that cannot be reduced to within ALOS must be assumed/accepted by the appropriate airworthiness authority within both the technical and operational chains. If the unmitigated risk is determined to be “Extremely High,” then the associated Record of Airworthiness Management (RARM), which documents the risk, will be staffed to the AA for acceptance. The AIA auditing and raising of observations during the consistent information flow associated with the risk assessment process is an important portion of the AIA’s monitoring role in the Airworthiness Program. Consequently, AIA staff give high priority to completion of this activity within the safety organization.

20. A RARM is a key airworthiness document in the process of managing airworthiness risk. As the AIA does not have any authority to accept risk, it would be inappropriate for the AIA to sign-off on RARMs in the manner that the OAA and TAA do; however, the AIA has an obligation to monitor and audit the RARM process. To this end, the TAA and OAA have developed processes to ensure that the AIA has the opportunity to exercise the monitoring function consistently by being made aware that a RARM is being raised. The monitoring includes, but is not limited to, the review of the hazard identification, risk assessment, risk
control plan, and acceptance. It should be noted that involvement of the Div FSO in the development of a RARM does not fulfill the AIA monitoring requirement. While DFS and the Div FSO communicate regularly on the subject of RARMS, the Div FSO is an advisor to the OAA and is not included within the CDS Delegation letter as having a monitoring/audit role, nor has the AIA delegated such authority to the Div FSO.

**OTHER AIA PROGRAM MONITORING ROLES**

21. Several other activities that the AIA and support staff undertake play important roles in the Airworthiness Program and will continue to grow in importance as the support and operational relationships for DND/CAF grow within the private sector. These include but are not limited to FS surveys of contractors, monitoring of Technical Assistance Visit reports by TAA staff, monitoring of DND/CAF contracts and aviation projects, AIA visits to private sector contractors and investigation of matters of safety brought to the AIA’s attention.
ANNEX A– IAC CHECKLIST FOR AERONAUTICAL PRODUCTS

Reference: 1150-21 (DFS), CVR/FDR Policy Implementation Extension, 21 Jun 10

As a minimum, the list of requirements in Table 1 shall be assessed before an Investigative Airworthiness Clearance (IAC) is issued. If a specific item is not complete but a suitable substitute is available or the item will be resolved in an acceptable timeframe, a Provisional Investigative Airworthiness Clearance (PIAC) can be issued until the requirement is met. All PIAC shall identify a maximum validity period, at which time a revised PIAC or an IAC shall be re-issued. PIAC shall remain valid until such time as it is superseded by IAC, it is revised, or it is revoked. The AIA will review PIAC with the Annual Airworthiness Report – Investigative.

<table>
<thead>
<tr>
<th>Item</th>
<th>Requirements</th>
<th>Description/Details Required</th>
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<tbody>
<tr>
<td>1</td>
<td>Flight Safety Investigation and Reporting</td>
<td></td>
</tr>
<tr>
<td>1a</td>
<td>Letter from CoC (e.g. CO, flight manager, accountable executive) endorsing the FS program and the requirement to report and investigate FS occurrences.</td>
<td>Provide reference to the document and procedures that emphasize the CoC obligations and commitment to the FS program.</td>
</tr>
<tr>
<td>1b</td>
<td>Trained, and AIA-authorized (IIC 3, IIC 2, or IIC 1) FSOs at both Unit (CAF or contractor) and DFS level</td>
<td>Obtain full name, title, and telephone number of the individual doing this role. The individual shall attend FSC (include course serial), and understand their responsibility to report and investigate occurrences. Also provide reference to the certification letter that indicates the individual’s authorization level (i.e. IIC 3, IIC 2, or IIC 1) as detailed in Chapter 4.</td>
</tr>
<tr>
<td>1c</td>
<td>Reporting capability in FSOMS;</td>
<td>The FSO shall have access to FSOMS, allowing him to input occurrences/investigations, and to perform searches as needed.</td>
</tr>
<tr>
<td>1d</td>
<td>Emergency Response Plan (1-888-WARN-DFS)</td>
<td>Provide reference to ERP (or equivalent document) which triggers a call to DFS in the event of an accident/serious occurrence.</td>
</tr>
<tr>
<td>1e</td>
<td>3rd line maintenance contractor has FS program in place.</td>
<td>Contract is to include the standard PWGSC contract Clause: B4064C (2008/05/12) Flight Safety.</td>
</tr>
<tr>
<td>2</td>
<td>Investigation Support</td>
<td></td>
</tr>
<tr>
<td>2a.</td>
<td>Aircraft hazardous content list to include all on-board hazards and exact on-board location</td>
<td>(1) In order to protect personnel requiring access to the crash site (first responders, Recovery and Salvage team, investigators...), a detailed list of aircraft hazards shall be provided. Format shall be IAW STANAG 3896.</td>
</tr>
<tr>
<td>Item</td>
<td>Requirements</td>
<td>Description/Details Required</td>
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<td>(2)</td>
<td>Confirmation that a copy of this document has been provided to first responders at the Main Operating Base (MOB) and secondary Operating locations (e.g. Ships for Maritime Helicopter) and Recovery and Salvage Team shall be included in the IAC report.</td>
<td></td>
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<tr>
<td>2b.</td>
<td>Access to Subject Matter Expert (SME)</td>
<td>To support various investigations, it is often required to have access to various SMEs (e.g. pilot qualified on aircraft type, maintainer qualified on aircraft type, engineering resources, etc) in support of an investigation. The process to reach these additional resources shall be detailed in the final IAC report.</td>
</tr>
<tr>
<td>2c.</td>
<td>Flight Data Recorder (FDR)</td>
<td>Document if the new/modified fleet meets the C Air Force CVR/FDR Policy. If a waiver was signed, include the reference. A general description of the recording system is required along with a full list of recorded parameters.</td>
</tr>
<tr>
<td>2d.</td>
<td>Cockpit Voice Recorder (CVR)</td>
<td>Document if the new/modified fleet meets the C Air Force CVR/FDR policy. If a waiver was signed, include the reference.</td>
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</table>
| 2e. | National Research Council (NRC) is authorized and capable to read/interpret both the CVR and the FDR | Document/verify the following:  
(1) NRC is authorized to read FDR (No ITAR restrictions);  
(2) NRC has necessary software licences to read CVR/FDR;  
(3) NRC is equipped to read and interpret the FDR. This implies that NRC has all the necessary software/hardware to do this as soon as the fleet operates under DND airworthiness authority;  
(4) NRC is equipped to read a severely damaged FDR;  
(5) NRC is equipped to read CVR; and  
(6) An initial download must be sent to NRC, to confirm their ability to read. |
<p>| 2f. | Acceptance of CVR and FDR system | (1) An initial baseline verification ensures that each aircraft entering service records data appropriately, and it provides a baseline of comparison in case of an accident. Document when the process will be initiated for each individual aircraft (No later than immediately after the first in-service flight, when an aircraft is delivered to the CAF) and (2) A final verification will be required for each individual aircraft’s FDR once the recorder’s full capacity has been reached. |
| 2g. | List of all Non-Volatile Memory (NVM) components and cards | A document shall be created to list all on-board equipment that will retain flight information in the event of an accident (for example engine control units may record key engine parameters at time of impact). Exact Weapon Replaceable Assemblies (WRAs), information recorded, time of recorded information, and exact location on the aircraft (drawings or sketches) shall be provided for each item. |</p>
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<thead>
<tr>
<th>Item</th>
<th>Requirements</th>
<th>Description/Details Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>2h.</td>
<td>Investigators are cleared to investigate the fleet (i.e. ITAR)</td>
<td>Document any security, ITAR or other restrictions that could be applied to investigators. The FSO and a minimum of two DFS-2 investigators must be cleared to investigate. A plan shall detail how and when all other DFS-2 investigators will be cleared.</td>
</tr>
<tr>
<td>2i</td>
<td>Unit has processes (procedures and Out of Sequence Inspections) and tools to implement 1 Cdn Air Div Order 3-304</td>
<td>As per 1 Cdn Air Div Order 3-304, CVR/FDR data shall be sent to NRC annually for validation and correlation verification. Confirm that the operating unit has the necessary tools and process/inspection card to detail how the yearly download will be carried-out. This requirement also needs to be covered by the maintenance program (possibly using an Out of Sequence Inspection). This element must also ensure that 1 Cdn Air Div Order 3-304 has been updated.</td>
</tr>
<tr>
<td>2j</td>
<td>DFS holds relevant publications in support of investigations: AOIs, Flight Manual, SMM, MEL, Tech Publications, SOI, and CONOP</td>
<td>Hard copies or electronic access to relevant fleet information must be provided to DFS investigators.</td>
</tr>
<tr>
<td>2k</td>
<td>DND-TSB Working Arrangement has been updated to clearly define investigative responsibilities WRT this new fleet</td>
<td>DFS to initiate amendment process as necessary.</td>
</tr>
</tbody>
</table>

Table 1. Requirements to Obtain an IAC
CHAPTER 12 - AIA ADMINISTRATION PROCEDURES AND ETHOS

INTRODUCTION

1. For the most part, the detailed AIA administration procedures are contained in DFS/AIA SOPs and amended as necessary through internal staffing within the various levels in the FS System. The purpose of this chapter is to lay out expected behaviours, general procedures and internal review protocols for airworthiness investigation team members, for the FS System staff at all levels and for the associated staffing of airworthiness investigation reports.

2. The general principles and obligations of the Defence Ethics Program are laid out in the Defence Ethics Statement. This statement rank-orders the principles of behaviour expected of DND/CAF personnel: first, respect the dignity of all persons (humanity); then, serve Canada before self (society) and; last, obey lawful authority (law). Furthermore, there are six obligations of equal weight that govern general actions: integrity, loyalty, courage, honesty, fairness and responsibility. This ethics statement has been used in combination with the guidelines for TSB investigators from their operations manual and the Code of Ethics and Conduct from the International Society of Air Safety Investigators (ISASI) to craft the Airworthiness/FS Ethos.

AIRWORTHINESS/FLIGHT SAFETY ETHOS

3. The perceived behaviour of AIA/FS personnel is every bit as important as actual behaviour. With this in view, all persons having contact with the AIA/FS system and its personnel expect the highest standards of professionalism and integrity as well as just treatment in an open and no blame atmosphere. This is essential to foster the self-reporting and admission of errors that allows the whole system to be successful. To accomplish this behaviour and ingrain these characteristics in AIA/FS staff, the following principles are the norms the AIA expects from all investigators and associated staffs as they investigate in an independent, non-partisan and responsive manner:

   a. Respect. We are committed to respecting the dignity of all with whom we deal and always in a considerate and courteous manner;

   b. Professionalism. As a core responsibility, we will maintain a highly competent, skilled and knowledgeable AIA staff through appropriate continuous personal education and the development, review and amendment of the DND/CAF airworthiness and FS system;

   c. Integrity. We are guided by honesty and propriety in conducting all of our affairs and do so for the betterment of the whole system;
d. Openness. We accept and share information freely and openly, while respecting the identity of the information providers and the uses for which the information may be employed, to the full extent of the law; and

e. Fairness. We treat all individuals and organizations equitably.

**INVESTIGATOR CODE OF ETHICS**

4. All investigators associated with AIA investigations will carry out their duties in a professional, equitable, expeditious, and open manner. In addition, investigations will be conducted IAW the *Aeronautics Act*, the *CTAISB Act*, the *Access to Information Act*, the *Privacy Act*, and applicable Orders in Council, conventions and agreements as well as within the policies, standards and processes listed in this manual and the A-GA-135 series of publications. Investigators are required to perform their duties with the highest personal integrity. In particular, AIA investigators shall:

a. Ensure that all evidence obtained in an investigation is given the significance it deserves relative to other evidence;

b. Ensure that all items presented as fact have been checked for validity, including judgements that are based on personal experiences;

c. Follow all avenues of fact determination which have reasonable probability of achieving appropriate PM recommendations;

d. Use the best available expertise, methods, and equipment in determining the validity of information;

e. Keep an open mind to the introduction of new evidence or relevant opinions, and be willing to revise one’s own findings accordingly;

f. Ensure that investigations are conducted in an unbiased and objective manner, without prejudgments which might be perceived as being partial to any party:

g. Employ the highest ideals of courtesy and fairness in dealings with involved individuals, NOK, interested parties, industry and the public at large;

h. Investigators authorized to speak to the media, (generally IICs, WFSOs and Public Affairs Officers), will release only confirmed, factual information that they are authorized to release to those external to the investigation and must bear in mind the privacy rights of individuals and NOK at all times. All investigators will represent the AIA and DND/CAF in a professional manner;
i. Ensure that their investigator status is not used to effect personal gain or favour. In addition, disclose to the AIA or his representative, any potential for criticism of personal association, e.g. personal friendship with a key witness, previous work experience for a “party of interest,” etc.;

j. Promote the FS Program and occurrence investigation as fundamental elements in DND/CAF accident prevention; and

k. Contribute to the development of the profession by sharing knowledge and experience and by striving for the highest level of proficiency and effectiveness in their own service.

INVESTIGATION TEAM MANAGEMENT PRINCIPLES

5. The following protocols and staffing responsibilities will apply to occurrence investigations where diverse team support from personnel or units are called for and those investigations requiring inter-agency support (such as QETE, NRC, DRDC or AETE). The latter support situation is detailed in separate Service Level Agreements (SLAs) or Memoranda of Understanding (MOU) between the AIA/DFS and those agencies but the principles of team support, staffing and cooperation will be discussed in this section. These principles will also be applied to situations where support from individuals or special units (Aircrew members, Technical members, Recovery and Salvage, Fleet Diving Unit, etc) is required for the investigation.

6. For each occurrence there is only one AIA investigation and one investigation team; however, the team composition may be adjusted as the investigation proceeds and more information becomes available that requires team membership adjustment. The AIA is the authority that convenes an occurrence investigation and in that convening process, appoints an IIC who is accountable for the overall conduct of the investigation. The AIA may change the IIC as required for any reason but all investigation team members will be informed of such changes. Such changes are usually for staffing, changes in priority or transfer reasons and should not be construed as having any other meaning. IIC changes will entail detailed transfer protocols within the AIA staff, specified in DFS SOPs. Investigation team members (inter-agency members) may be changed for similar reasons but the AIA may request details on supporting agencies decisions under such circumstances and the AIA retains the right to request reconsideration of such decisions.

7. During the field phase, the IIC has operational control; he/she will allocate investigation tasks and supervise personnel at the site, and, where necessary, coordinate activities with the appropriate managers/supervisors. Specialist personnel will conduct work IAW standards and procedures established by their respective agencies and the SLAs; however, in the interest of team cooperation
or management, the IIC has the right to assign tasks that may be outside of the anticipated standard work areas for any team member.

**INFORMATION PASSAGE PROTOCOLS**

8. The AIA is the sole authority for information release of all information gathered for or by the investigation team unless he has delegated this authority IAW Chapter 6 (to the IIC) or provisions for its release is governed by an inter-agency agreement, such was the DND-TSB Working Arrangement. Consultation by investigation team members or specialist members outside of inter-agency agreement protocols may occur but the IIC must be aware of the consultation, its purpose and then will limit the information passed for the consultation purpose. The purpose of this procedure is to stop the spread of incomplete information or speculation regarding information shared in the consultation process. Personnel that are consulted in such circumstances must agree to retain the privilege associated with this information.

9. Throughout the investigation, team members and supporting agencies are responsible for maintaining the privilege of information entrusted to them as part of the investigation. During consultation, any information passed to a consultant must be tracked, accounted for and eventually retained by the member or destroyed by the member or agency conducting the consultation. Again, this protocol is to stop speculation or the release of incomplete information and to protect the privilege associated with some information sources.

10. Inter-agency reports are to be treated in a similar manner as other investigation information. The reports are prepared for the AIA and are not to be shared otherwise (except as specified in the applicable SLAs), without explicit permission of the AIA or his representative and then only for consultation purposes. Also, during the report composition phase or during inter-agency review and consultation, similar protocols will be observed by all investigation team members.

**INVESTIGATION SITE MANAGEMENT ANOMALIES**

11. Accident Site Access for Insurance Representatives: Occasionally insurance representatives or underwriters may request accident site access. After the requester’s identity has been verified, the request has been validated and the site is appropriately safe, the IIC will grant site access to such persons in a closely supervised manner. This is to protect evidence on the site and the well-being of individuals conducting such surveys. In no circumstances shall site access be granted when wide spread hazards to persons are present.

12. Accident Site Access for Private Property Owners: Should the location of an accident be on private property, the AIA’s investigation is not permitted to impede owner access to the site. However, the IIC or site manager will make it known to such persons the dangers associated with access to the site. Normally,
DND/CAF will not issue PPE for such persons seeking access and the dangers of access must be impressed upon the property owner. Should assistance of a transient nature be required by a property owner on an accident scene (such as turning power on or off or like activity), the investigation team or a representative (salvage team or OSCAR member) may assist the owner when reasonable to do so. Should site access be demanded, the owner should be accompanied by a qualified person with their appropriate PPE donned, to point out dangers on the site.

13. Accident Site Access for Accredited Observers: The IIC will determine this depending on circumstances and the nature, qualifications and status of the observer. For access to be granted, the observer must be a trusted agent that has agreed to their role in the investigation. Normally, the observer should be fully trained in hazards and accident site protocols. PPE will be issued for circumstances when access is granted to observers and investigation team members shall accompany observers during such access.

14. Accident Site Access for Others: Many other individuals may seek accident site access for various reasons, such as media, CASARA agents, police, coroners, NOK, DND/CAF personnel, etc. Each case must be examined on an individual needs basis and the IIC or the appointed site manager must make decisions based upon the circumstances at hand. In no case will casual access be granted. When it is decided to grant access for whatever reason, team members must don the appropriate PPE and a qualified team member will accompany the site visitor. Depending on circumstances, DND/CAF PPE may be issued to the visitor; however, this is not a normal circumstance (for example, NOK, police or coroner may be issued particulate masks for a site visit). A record of such accident site access shall be maintained.

**POST-FIELD PHASE EXPECTATIONS**

15. Although personnel from other agencies or units return to their normal workplace after the field phase and are accountable to their own supervisors, they remain tasked by the AIA until completion of the investigation. Supervisors must be made aware of these responsibilities and allocate sufficient time for personnel to discharge such AIA duties.

16. After the field phase is complete, the IIC will, in consultation with team members and supporting agencies, prepare an investigation work schedule that will outline the scope of work to be completed, significant investigation tasks, milestones, and due dates. For most investigations, this will be a standard timetable in order for the AIA to meet established investigation milestones. However, in complex investigation scenarios, this could involve protracted work plans that may require investigation team members to notify supervisors of this commitment. Should the work plan not be possible due to workload, the IIC and the AIA are to be notified in writing with the reasons. The IIC may request periodic updates to ensure that work is proceeding in an effective and efficient manner.
manner. Should undue progress be noted in work scheduled, the AIA may request milestone commitments from supervisors of team members so that investigation timetables can be maintained.

17. Upon return from the field phase, the IIC will conduct a “Hot Wash” at DFS where field party and rear party lessons learned will be shared with other DFS staff. This debrief should include all available investigators and any other staff that had a part in the conduct of this phase of the investigation. Sometimes the production of records of these lessons may be tasked to the investigation team should DFS or DFS 2 decide that they would be of value for future training or SOP amendment.

18. After the Hot Wash debriefing, the IIC will brief the CI and SI on the work plan schedule that is anticipated with the next phases of the investigation. Depending on workload and personnel availability, a modification to the investigation team composition could be formulated at this stage to manage any anticipated complications or undue time delays in report production.
ANNEX A - IIC CHECKLIST

Note: This Checklist should be used in conjunction with the guidance and expanded checklists in the A-GA-135-002/AA-001 “Occurrence Investigation Techniques for the CF.”

Pre-Occurrence Preparation

Documentation & Qualifications

- AIA Certification and Authority Limits
- Biohazard Qualification
- Weapons Qualification
- CBRN Qualification
- Personal Training Status and Upgrade Requirements
- Financial Authority and Limits
- Passport (Green and Blue)/Visas
- Familiarity with ClaimsX and Travel Procedures
- Any other requirements as directed by CEFCOM HQ (for outside North America deployments)

Electronic Equipment Preparations

- Computer with required templates and “Go Kit” information/files loaded
- Photographic Equipment
- Recording Equipment
- Communication devices (to include international Blackberry, Sat phones, etc)
- Other Specialized Investigation Equipment
Personal Kit

- Climate/Uniforms (appropriate for up to two weeks)
- Remote Location Requirements
- Personal Protection Equipment & Comfort
- Packs and cases

Specialized Equipment

- PPE Biohazard Kit
- Breathing Apparatus and Filters
- Survey, tools and sample kits

Medical

- Vaccinations up-to-date (must include Hep B)(booklet)
- First Aid qualification

Actions on Notification

Details of Occurrence

- Aircraft & Tail No
- Unit & Wing
- Crew & Pax (plus disposition)
- Date & Time
- Mission, Flight Itinerary, Occurrence Location & Destination
- Known Hazards & Cargo
- Nature of occurrence & estimate of damage or SFCL
- Flight Recorders & Disposition (all recorders to include HUMS, Op Load Monitors, etc)
- Characteristics of Site, Security & On-scene POC

Notification Confirmation (other OCIs and CoC)
Initial Team Build & Arrangements

- IIC
- DFS Members
- MOU Members
- SMEs (for occurrence specifics)
- Consider Observers / Accredited Reps / Other Military, etc
- DFS Tasking Message
- CEFCOM ETA message for deployed occurrences
- Travel Arrangements
- Accommodations
- Local Transportation
- Notify Support Agencies (NRC, QETE, TSB, etc)

Key Contacts List

Actions Pre-Departure

Travel

- Plan and Team Details (plus return TANs)
- ClaimsX
- Passport (Blue or Green situation dependant) / Visas

Data & Equipment Gather & Initial Set-Up

- FSOMS
- Investigation checklists, references
- AOIs, Checklists, SMMs, K Drive Go Kit Files (& others as Req’ed)
- Investigation Equipment (gather & pack)
- Personal Equipment (home & office)
- Establish FS actions underway (ie quarantine, samples, impound, witness statements & lists etc)
Establish Comms with Security Agencies & Interim travel Comms Plan

Plan for FDR/CVR or other recorders

Admin support (work areas, interview rooms, conference rooms, phone/fax lines, computers, etc)

Back party POCs & Procedures

Brief DFS 2 on Plan

**Actions while Travelling**

**Prepare**

- Team briefs IAW checklist (biohaz levels, site hazards and protocols, team rhythm, evidence keeping, daily routine, etc)

- Consult Aircraft Type Hazards List (Annexes attached to Post-Crash Environmental Guidelines)

- WComd (or rep), WFSO, OSCER in-brief

- Initial projected schedules

- Team meeting SOPs & considerations (timings, sitreps, forecast of requirements etc)

- Information release protocols, AIA expectations

- Security plan (site, evidence, information, OPSEC, etc)

- NOK plan and process

- Media plan and interview information

- Group Structure

**Actions Upon Arrival**

- Contact WComd (courtesy or in-brief)

- WFSO & OSCER (initial situation & update)

- Obtain Detailed Location and Maps

- Establish Initial Organization Meeting Plan (time, place and attendees)

- Visit Site (biohaz/PPE Kits, etc)
- Safeguard of wreckage
- Preliminary survey - ensure cordons (biohaz, armament, materials, hazmat cargo, etc) set
- Consult on-scene controller (OSCER) for sitrep & comms
- Consult various experts (responders / Wing) for situation / site update (Police, Env O, RADSO, HazMatO, Medical O, Public Affairs, etc)
- Consult photographer and establish photo priorities

➢ Convene Initial Team Meeting
  - Introductions of all Team Members & Observers (present and expected)
  - Outline Process, Purpose and Products of Investigation
  - AIA expectations (as per AIM)(+daily Sitreps)
  - Assign Initial Groups (distribute checklists and requirement expectations)(eliminate, create or combine A/R)
  - Consider Members of other Organizations (RCMP, TC, TSB, Police, Coroner, industry)
  - Observers (status, protocols, sign AIA undertaking letter, IIC expectations, etc)

➢ Brief All
  - Cooperation, communication and coordination (not independent action)
  - Site location, directions & Maps (distribute)
  - Site safety - Biohaz levels, site hazards, EOD and protocols, cordons and site OPI
  - Make available aircraft specific hazards Annexes (in Post-Crash Environmental Guidelines and Annex Z)
  - Site OPI to establish and brief site protocol details, in brief late comers, etc
  - Evidence keeping protocols & log (on site, documents, statements, reports, other, etc)
- Safeguarding and disposition of quarantined items and other evidence
- Initial projected schedules, Team SOPs & considerations (timings, forecast of special requirements, meeting attendance records, hazard exposure records, etc)
- Daily Sitrep Requirements
- Information release protocols (as per AIM)
- Security plan (site, evidence, information, OPSEC, etc)
- Checklist requirements for each Group (brief & distribute)
- Participant & Advisor ID cards
- Expected ENV Conditions & Transport Plans
- Media Plan
- Privileged Information Safeguards (Medical, CVR and statements, etc)
- Interaction Protocols for contact other Authorities (Coroner, BOI, Police, TC, TSB etc)
- Requirements for departure (end of field phase)
- Post field phase requirements

**Field Investigation Phase**

**Assume Control of the Site from OSCER or site OPI**

- Appoint Investigation Team OPI for Site
- Security (review, accept, amend A/R)
- Communications
- Cordons and In/Out Procedures
- Contacts (Police, landowners, coroner, witnesses, W Env O, RASO etc)
- Hazards (documented, consultations undertaken & POCs, clean up steps taken, cargo, etc)
- Event log copied
Media – events observed, POCs, etc

Photos, video & other media collection (and time log for each)

Shelter, Food, Water and sanitary/hygiene requirements

Consumables and re-supply (Haz kits, gloves, goggles etc)

Other points situation dependant

Establish Team Rhythm and Expectations

Daily Meeting Plan and Attendance (& record)

Comms plan & protocols

Daily Sitrep Production

Facilities & Other Special Requirements

Financial Requirements (projected and seek authority)

Assign Preliminary Report Composition Duties and Compile Report

Team Information Sharing and Release Protocols (internally and externally)

Evidence Preservation & Log

Hazard Exposure Log

Monitor Group & Member Progress – Supplement A/R

Consider requirement for specialized experts

Assign duties not covered by established Group assignments

Review Individual & Group field reports / notes, log & retain

Shipment of Evidence for Further Analysis

Consider Release of Immediate PMs on recurrent basis (A/R)

Ensure all Required Info Collected, Preserved & Initially Analysed (Use Checklists In Part II)

Technical Group

Operations Group
Witness Group

Medical

Human Factors Group

Escape and Survival Systems

Other Support Groups or Members
  - Public Affairs
  - RASO
  - EOD
  - W Env O
  - Administration
  - Legal
  - Liaison
  - Site Security
  - Assisting Officer (A/R)
  - Others

Actions for Field Departure

- Ensure Sufficient Data for Preliminary Report
- Collect all Field Notes and Reports (copies)
- Establish Expected Work and Schedules for SMEs and Other Groups Post-Field Phase
- Collect and Arrange Transport of Articles and Samples for Further Examination
- Pass Control of Site to Wing or Other Clean up Authority
- Compose and Conduct Out Brief for WComd (or Rep)

Initial Post-Field Activities

- Conduct “Hot Wash” for DFS, DFS 2 and other Investigators on return
- Prepare Preliminary FSIR
- Prepare “From the Investigator”
- Distribute FTI and supporting paperwork to MND A/R
- Prepare and Arrange for NOK FTI Release
- Prepare and Liaise with Public Affairs for Media Release of FTI
- Prepare Training Reports and Recommendations for all Personnel U/T
- Ensure all Team Personnel Medical Docs updated with “Exposure to Hazardous Conditions” Log
- Brief DFS “steering committee” on intended direction of investigation
- Ensure Thank You Letters Prepared and Sent A/R
- Prepare, Log and Store Evidence – Add To A/R

**BOI Liaison – Establish and Log**

**Analysis Phase**

- Conduct Testing and Liaise with Support Agencies A/R for Test Activities
- Monitor, Collect and Analyse SME and Group Supplementary Reports and Analysis
- Accept or Request Follow-on Reports
- Brief, discuss and develop Analysis with DFS 2 and Other Investigators A/R
- Develop PMs in association with Analysis and Liaison with COC (+OAA & TAA A/R)

**Consider Immediate PM Recommendations A/R**

**Initial Report Phase (Draft for Comment)**

- Prepare, staff internally and amend A/R Draft for Comment FSIR
- Prepare Distribution List and associated Correspondence
- Release Draft for Comment
- Prepare and store Comments Log for PDIs (Evidence File)
Final Report Phase

- Monitor, Collect and Analyse PDI Comments
- Accept or Request Clarification of PDI Comments A/R
- Brief, discuss and develop Report Amendments with DFS 2 and Other Investigators A/R
- Prepare, staff internally and amend A/R FSIR Final Report (plus Annexes)
- Prepare and Arrange for AIA/DFS Signing of Final Report
- Prepare Individual PDI Return Letters based on Report Amendments
- Prepare “Epilogue”
- Send Report and Epilogue for translation
- Prepare and staff “21 Day Letter” to OAA/TAA for CAS
- Receive and Discuss OAA/TAA replies with DFS 2 and DFS (AIA)
- Draft “Action Directive” for staffing by D Air FR to C Air Force

Release of Reports Phase

- Staff (A/R) Final Report and Epilogue to MND, through C Air Force/CDS
- Prepare and Arrange for NOK Final Report and Epilogue briefings
- Prepare and Liaise with Public Affairs for Media Release of Final Report and Epilogue
- Release Final Report and Epilogue
- Distribute PDI Comment Letters
- Conduct Media Events A/R

Post-Release Actions

- Prepare FSOMS Input of Final Report, Cause Factors and Associated PMs
- Monitor PM Implementation (fleet desk officer)
- Report PM Implementation to ARB

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Follow-up Activities

- Close Completed FSOMS File
- File the Closed / Completed FSIR