DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, DC

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9 August 2012

MEMORANDUM FOR DISTRIBUTION C
MAJCOMs/FOAs/DRUs

FROM: USAF/SE
1400 Air Force Pentagon
Washington DC 20330

SUBJECT: Air Force Guidance Memorandum to AFI 91-204, *Safety Investigations and Reports*

1. By Order of the Secretary of the Air Force, this is a Guidance Memorandum immediately changing AFI 91-204. Compliance with this Memorandum is mandatory. To the extent its directions are inconsistent with other Air Force publications, the information herein prevails, in accordance with AFI 33-360, *Publications and Forms Management*.

2. The 14 Oct 09 Immediate Action Guidance memorandum addressed the new costing levels established by OSD and the three primary 91-204 sections affected. However, 91-204 contains additional monetary based sections which address costing directly without making reference to the mishap class. The following additional AFI 91-204 sections are also affected by the new OSD costing level changes: 1.8.1.3.1 and 1.10.5.4. Section 1.11.1.2.1 remains as written until an evaluation on the values cited can be completed.

3. The following information is related to paragraph 1.13: OSHA Recordable Event inputs in AFSAS are driven by CFR 1910.04, *OSHA Recording and Reporting Occupational Injuries*. These are injuries incurred that are duty related, but not normally required to be reported by USAF safety guidance. The following recordable events that are required to be input are, "Workplace Violence" and "Terrorist Act". When all information is captured in AFSAS the system will automatically populate the OSHA 300 Log.

The following are OSHA's definitions for Workplace Violence and Terrorist Act:

a. Workplace Violence - injuries and illness that result from any act of physical violence, i.e., physical assaults, homicide, disruptive behavior, that occurred at the work site.

b. Terrorist Act - injuries and illnesses that result from a terrorist event or exposure in the work environment are considered work-related for OSHA recordkeeping purposes.

4. DoDI 6055.07 has standardized data input that provides common language for all mishaps in the DoD. Table 5, Ground Mishap Category and Subcategories, is specific for Ground Safety mishaps. Based on the DoDI make the following pen and ink changes to 91-204:

a. Para 1.8.1.9., Change title to read: Industrial and Occupational.

b. Para 1.8.1.9.2., Change title to read: Sports, Recreation and Individual Fitness.

c. Para 1.8.1.9.4., (Added) Combat Support and Training. A mishap associated with non-combat military exercise or training activity designed to develop a military member's physical ability, maintain or increase individual or collective combat and peacekeeping skills, and is due to either a mishap or the result of natural causes when the medical event occurs during or within one hour after any training activity where the exercise or activity could be a contributing factor. This includes all training activities that do not meet the definition or are not included as values in sports, recreation, and individual fitness.

5. DoDI 6055.07, Table 8, "Exemptions From the Provisions of This Instruction," will be used to determine mishap reporting exemptions. This Table includes the provision for excluding minimum stress and strain mishaps and should be considered when referencing paragraph 1.4 of AFI 91-204.

6. Change AFI 91-204, para 1.10.4, opening sentence to read: Any mishap resulting in total cost of property damage is $20,000 or more, but less than $50,000; or a recordable injury or illness not otherwise classified as a Class A, B, or C mishap.

7. Change AFI 91-204, para 1.10.5.4. to read: Property Damage Events (Non-Aviation). Mishaps that do not have an injury or illness and the direct cost is totaling less than $20,000. These mishaps will be investigated and should be tracked locally or as prescribed by the applicable MAJCOM.

8. Formal report and final message QC. In accordance with AFI 91-204 section 7.1, convening authority SEF offices will review, as a minimum, the formal report Tab T, Tab Y and final message to ensure the SIB/SIO followed formatting and investigative guidance established in both AFI 91-204 and AFMAN 91-223. Convening authority SEF offices will ensure AFI 91-204 sections 5.9, 5.10 and 5.11, and AFMAN 91-223 section 6.5.5.1 were followed. Additionally, although AFSAS has an error check capability, convening authority SEFs will review AFSAS data fields prior to the release of the final message for accuracy (i.e. mishap category, mishap class, mishap costing, one-liner, etc.).

9. Formal report waivers. Part 1 tabs can be individually waived by the convening authority SE office, see AFI 91-204 section 6.3.1.2.2. Part 2 tabs are not individually waived. If no information is available for Part 2 tabs, utilize 91-204 guidance in section 6.3.1.2.1. See AFMAN 91-223 for entire Part 2 waivers.

10. Investigation Outbrief. Per AFI 91-204 section 6.4.1, when the MAJCOM is the convening authority SIBs may brief the NAF/CC for informational purposes only if they have the approval of the MAJCOM/CC. This also applies to information-only briefs to the COMAFFOR. All other investigation outbriefs to the affected squadron, group or wing are prohibited and cannot be waived by the MAJCOM/CC. However, a MAJCOM/CC can invite Sq/Grp/Wg CC’s to the MAJCOM outbrief.

11. Natural Phenomena Mishaps. AFI 91-204 section 1.4.8 defines one of the exceptions to mandatory reporting. However, an exception to reporting is not equivalent to an exception from investigating the mishap. In order to determine if adequate actions were taken an investigation must be initiated and documented. If the investigation determines all aspects, to include human factors, were adequate only then is no reporting necessary.

12. Mishap Review Panels. AFI 91-204 section 7.3.8 describes requirements of the MAJCOM/DRU/FOAs/ANG conducted mishap review panels (MRP). MRPs are intended to include all open Class A and B recommendations assigned an OPR within the specific command, not just at the command level. The purpose of an MRP is to address Class A and B hazards throughout the command regardless of the organizational level of the OPR. AFSAS can be used by MAJCOM safety offices to find these open recommendations by including "subordinate units" in the recommendation search criteria data fields.

13. Risk Acceptance. For Class A and B mishap primary recommendations the OPR requests closure from the Air Force Safety Center. IAW AFI91-204, section 7.3.5.5, if the recommended actions were <u>not implemented</u> a risk acceptance statement from the lead MAJCOM CC/CV (i.e. weapon system lead command) is required. Risk acceptance is normally obtained through the MRP process. If the lead MAJCOM is not the OPR, the current OPR will reassign the recommendation to the lead MAJCOM with an appropriate risk analysis to allow the lead MAJCOM/SE office to brief the commander and gain risk acceptance.

14. Causal Letter Procedures. AFI 91-204 section 6.6 directs actions to take when notifying an individual found causal in a mishap. Section 7.2.3.1 directs procedures that will be used when an individual is found causal by the Memorandum of Final Evaluation (MOFE) review conducted by AFSEC/SEF for individuals not already identified by the SIB. The notification letter will be provided by AFSEC/SEF to the MAJCOM SE for action IAW AFI 91-204. In addition to these procedures, a draft MOFE will also be provided solely for the individual to review. The MOFE will not be released by the AFSEC until after the individual has had an opportunity to respond.

15. Classifying Mishaps. Previous guidance directed Aviation Ground Ops (AGO) mishaps to use AFMAN 91-223 investigative guidance and procedures. Additionally, AGO mishaps that also meet the definition of Ground and Industrial will be cross-categorized as such within AFSAS. Specifically, these mishaps will be listed as category Aviation, sub-category AGO, and cross-category Ground and Industrial when creating a mishap in AFSAS.

16. Continuation of 2009 immediate action guidance. The following items are still in effect:

a. AFI 91-204 section 5.7 and AFMAN 91-223 section 5.4 do not address shipping aircraft wreckage to the location of the Safety Investigation Board for analysis. In most cases, the SIB responds to the location of the mishap. However, combat zones present unique challenges and, in certain cases such as RPA mishaps, evidence (including data recorders, aircraft components, airframes or sections of airframes) may need to be shipped to a suitable location for analysis.

The key to accomplishing this task is to treat all aircraft wreckage needing shipment for analysis as <u>time-critical investigative evidence</u>. IAW AFI 91-204 section 2.6.1, the Convening Authority determines "the scope and size of the investigation". Section 2.7.2 states that the Commander of the active duty Air Force installation nearest a mishap (or alternate organization as designated by the convening authority) will "provide logistical and investigative support as required". In cases where AOR airfields are predominantly non-Air Force, section 2.7.2 would

be applicable to the Commander of an active duty Air Force Wing with an SE office nearest the mishap. Overseas Contingency Operation (OCO) funds will reimburse the shipping agency for a mishap that occurred while supporting an OCO mission. To ensure reimbursement the shipping agency must utilize the appropriate ESP code based on their MAJCOM and the AOR (Example: ACC uses ESP code 7C for Afghanistan).

Investigative evidence will be shipped via the nearest (local) Traffic Management Office (TMO) or Distribution Flight, utilizing Air Force organizations and assets to the maximum extent possible. The shipping agency will set the priority of the cargo for channel flights IAW AFI 24-203 chapter 3. Investigative evidence will be priority coded TP-1. In some instances, the shipping agency may also need to provide a priority shipping letter to accompany the request. Time-critical investigative evidence, such as data recorders or suspect components, should be shipped via the most expedient method available, including the United States Postal Service or contractors such as FedEx, UPS, or DHL.

b. AFI 91-204 section 1.8.1.3.3 allows usage of either AFMAN 91-223 or AFMAN 91-224 investigative procedures for the investigation of Aviation Aircraft Ground Operations (AGO) mishaps. Due to fundamental differences between them, which have resulted in confusion during the investigative process, effective immediately all AGO mishaps will be investigated using AFMAN 91-223 guidance and procedures.

17. The policy in this Memorandum becomes void after 180 days have elapsed from the date of this Memorandum, or upon incorporation by interim change to, or rewrite of the affected publication, whichever is earlier. Contact Ms. Sandra Stacy, HQ AFSEC/SEFO (DSN 246-4099) or Lt Col William Resnik, HQ AFSEC/SEFF (DSN 246-1404) with any questions.

GREGORY A. FEEST, Maj Gen, USAF
Chief of Safety

BY ORDER OF THESECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 91-204

24 SEPTEMBER 2008

Safety

SAFETY INVESTIGATIONS AND REPORTS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction provides guidance that is common to investigating and reporting all US Air Force mishaps. It applies to all US Air Force (USAF), US Air Force Reserve (USAFR), and Air National Guard (ANG) military and civilian personnel. Four safety manuals supplement this AFI and provide detailed guidance to discipline specific mishaps. AFMAN 91-221, *Weapons Safety Investigations and Reports*, provides additional guidance for investigating and reporting nuclear, guided missile, explosives and chemical agents, and directed energy mishaps. AFMAN 91-222, *Space Safety Investigations and Reports,* provides additional guidance for investigating and reporting space mishaps. AFMAN 91-223, *Aviation Safety Investigations and Reports,* provides additional guidance for investigating and reporting aviation mishaps. AFMAN 91-224, *Ground Safety Investigations and Reports,* provides additional guidance for investigating and reporting afloat, motor vehicle, off-duty military, and ground and industrial mishaps. AFI 91-204 implements AFPD 91-2, *Safety Programs,* and DODI 6055.07, *Accident Investigation, Reporting and Record Keeping*. AFI 91-204 applies to commanders, managers, supervisors, and safety staffs at all levels, all persons who investigate and report Air Force mishaps, and those persons who handle such reports. This instruction provides guidance regarding the control and use of privileged safety reports and information. **Failure to observe the prohibitions and mandatory provisions in paragraph 3.3.1. by active duty Air Force members, USAFR members on active duty or inactive duty for training, and ANG members in federal status, is a violation of Article 92, Uniform Code of Military Justice (UCMJ). Violations by civilian employees may result in administrative disciplinary actions without regard to otherwise applicable criminal or civil sanctions for violations of related laws.** This regulation implements North Atlantic Treaty Organization (NATO) Standardization Agreements (STANAG) 3101, *Exchange of Safety Information Concerning Aircraft and Missiles,* 3102, *Flight Safety Co-operation in Common Ground/Air Space*; 3318, *Aeromedical Aspects of Aircraft Accident and/or Investigation*; and 3531, *Safety investigation and Reporting of Accident/Incidents Involving Military Aircraft and/or Missiles* (with US reservations); and 3750*, Reporting and Investigation of Traffic Incidents*. It also implements Air and Space Interoperability Council (ASIC) Air Standard (AIR STD) 85/02A, *Investigation of Aircraft/Missile Accidents/Incidents* (with US reservations). Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN

33-363, Management of Records, and disposed of in accordance wth the Air Force Records Disposition Schedule (RDS) located at **https://afrims.amc.af.mil/.**

Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF IMT 847, Recommendation for Change of Publication; route AF IMT 847s from the field through the appropriate chain of command. Send major command (MAJCOM) supplements to AFSC/SEFO, 9700 G Avenue SE, Kirtland AFB NM 87117-5670, for approval before publication.

See **Attachment 1** for a Glossary of References and Supporting Information.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. The information in **Attachment 5** of this document rescinds and replaces the human factors taxonomy in AFPAM 91-211, *USAF Guide to Aviation Safety Investigation* Attachment 8. The information in **Attachment 5** of this document applies to all safety disciplines.

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Chapter 1

GENERAL INFORMATION

1.1. Purpose of Safety Investigations and Reports.

1.1.1. Safety investigations and reports are conducted and written solely to prevent future mishaps. Safety investigations take priority over any corresponding legal investigations (paragraph **4.11.1.**). If initiated, OSI investigations take precedence over safety investigations until criminal activity, natural causes, and suicide have been ruled out as possible causes of damage, injury, or death. Safety investigations can be done concurrently with other applicable investigations, if necessary. Conduct safety and legal investigations separately to protect privileged safety information in the safety report. Privileged safety information will be used solely for mishap prevention.

1.1.2. Legal investigations provide a publicly releasable report of the facts and circumstances surrounding a mishap. Legal investigations may include a statement of opinion on the cause of the accident, gather and preserve evidence for claims, litigation, disciplinary and adverse administrative actions, and for all other purposes. An Accident Investigation Board (AIB) is one type of legal investigation and is convened for many space, aircraft, unmanned aerial vehicle (UAV/UAS), and missile mishaps IAW AFI 51-503, *Aerospace Accident Investigations*. A Commander-Directed Investigation (CDI) is another type of legal investigation that may be convened. A CDI may not be used in lieu of a safety investigation. Ground Accident Investigation Boards are convened for many ground accidents IAW AFI 51-507, *Ground Accident Investigations*.

1.2. Waivers to this Instruction. Waivers to this instruction will be requested through the MAJCOM/SE to AF/SE, unless otherwise specified in this instruction.

1.3. Mishaps and Events that Require Safety Investigations and Reports.

1.3.1. A mishap is an unplanned occurrence, or series of occurrences, that results in damage or injury as described in paragraph **1.3.1.1.** and meets Class A, B, C, or D mishap reporting criteria IAW paragraph **1.9.** All mishaps require a safety investigation and report. Reference AFMAN 91-22X for more specifics on mishaps that meet reporting requirements.

1.3.1.1. Damage or injury includes: damage to DoD property; occupational illness to DoD military or civilian personnel; injury to on- or off-duty DoD military personnel; injury to on-duty DoD civilian personnel; damage to public or private property, or injury or illness to non-DoD personnel caused by Air Force operations.

1.3.1.2. Although motor vehicle mishaps often result from some form of misconduct (e.g., speeding, driving while intoxicated, and reckless driving) they will be reported in accordance with this instruction.

1.3.2. An event is an unplanned occurrence, or series of occurrences, that does not meet mishap reporting criteria as defined in paragraph **1.3.1.** Class E events require a safety investigation and report (see paragraph **1.10.5.**). Reference AFMAN 91-22X for more specifics on events that meet reporting requirements.

1.4. Exceptions to mandatory reporting requirements for this AFI. The following occurrences do not need to be reported under this instruction. However, other instructions may require their reporting and the absence of a requirement for a safety report does not relieve the need to conduct an investigation.

1.4.1. Damage or injury by direct action of an enemy or hostile force. This does not include suspected cases of Friendly Fire, which will include a safety investigation and report in accordance with paragraph **4.11.1.**

1.4.2. Intentional, controlled, in-flight jettison or release of canopies, cargo, doors, drag chutes, hatches, life rafts, auxiliary fuel tanks, aerial refueling hoses, missiles, drones, rockets, explosive munitions, and externally carried equipment nonessential to flight unless ensuing reportable damage occurs. This includes intentional activation of flares, manually or by automatic countermeasure systems, with normal system function and no damage to property on the ground. NOTE: Report intentional jettison of missiles, drones, rockets, and munitions when the reason for jettison is their malfunction. Report all release of missiles or explosives that impact off range. If any of these caused damage to non-DoD property refer to paragraph **1.10.3.**

1.4.3. Intentional or expected damage to DoD equipment or property incurred during authorized testing or combat training, including missile and ordnance firing or destruction of DoD property to prevent capture by an enemy or hostile force, to include the following:

1.4.3.1. Intentional electro-explosive device activation when part of a normal missile test or launch sequence, the launch is aborted, and there is no other reportable damage.

1.4.3.2. Expected damage or destruction of equipment, pallets, parachutes, etc., during airdrop operations.

1.4.3.3. Damage to or destruction of Air Force equipment or property during authorized testing, including missile and ordnance firing, and UAV/UASs used as targets or on critical profile missions, provided all of the following conditions exist:

1.4.3.3.1. The extent of the damage or destruction was an expected or desired result of the test.

1.4.3.3.2. The damage or destruction occurred at planned times and for anticipated reasons.

1.4.4. Damage or destruction of a UAV resulting from a deliberative risk acceptance decision by an appropriate command authority to employ the vehicle in an environment or condition where the risk of loss of the vehicle is outweighed by operational requirements.

1.4.4.1. Although not an AFSAS reportable mishap, the accountable MAJCOM safety office will report this loss to HQ AF/SEI via e-mail. The report will contain the date, location (when available), object identifier, short narrative, and the approval authority which accepted the risk.

1.4.5. Except when required to be reported as a Class E event, a safety report is not required when <u>all</u> of the following three conditions are true:

1.4.5.1. The failed item is a component part or line-replaceable unit (LRU). Examples include flight line replaceable engine components and electronic boxes, air cycle machines, pumps, tires, and drag braces. The following are major assemblies and not component parts nor LRUs: aircraft subsystems such as engines, engine modules, landing gear, and gearboxes.

1.4.5.2. All damage and/or wear is confined to that component part or LRU. (If not confined, all associated damage costs must be added to determine if the occurrence is a reportable mishap.)

1.4.5.3. The failed item is maintained as fly-to-fail or reached pre-determined wear limits due to normal wear and tear, as defined by the applicable technical order or Single Manager (SM).

1.4.6. Engine foreign object damage (FOD), discovered during scheduled engine disassembly (e.g., depot overhaul for maximum operating time, not for known or suspected FOD), to aircraft, air-breathing missiles, or drone/UAV/UAS engines. NOTE: FOD may be reportable under TO 00-35D-54, *USAF Materiel Deficiency Reporting and Investigating System.*

1.4.7. Property damage, death, or injury as a result of vandalism, riots, civil disorders, sabotage, terrorist activities, or criminal acts (e.g., arson) unless these events occur in the work environment. **NOTE:** Although motor vehicle mishaps often result from some form of misconduct (e.g., speeding, driving while intoxicated, and reckless driving) they will be reported.

1.4.8. Natural phenomena ground mishaps where adequate preparation, forecasting, and communication actions were taken and there were no injuries to DoD personnel.

1.4.9. Normal residual damage as a result of a missile launch.

1.4.10. Pre-existing injuries or illnesses sustained before entry into military service or employment by the US Government, unless significantly aggravated by current tenure of service. See OSHA Recordkeeping Handbook, Section 1904.5 to determine work-relatedness.

1.4.11. Injuries or fatalities to persons in the act of escaping from or eluding military or civilian custody or arrest.

1.4.12. Pre-existing musculoskeletal disorders unless aggravated or accelerated by U.S. Government employment. See OSHA Recordkeeping Handbook, Section 1904.5 and 1904.12 to determine work-relatedness.

1.4.13. Injury or occupational illness to contractor personnel or damage to contractor property or equipment unless caused by DoD operations.

1.4.14. ANG state employee (Title 5) injury or illness on- or off-duty unless their injury or illness involved Air Force personnel, contractor operations, or property. See paragraph **1.12.**

1.4.15. Injuries or illness from animal, insect, or reptile bites to military personnel while off-duty.

1.4.16. Adverse bodily reactions resulting directly from the use of drugs under the direction of competent medical authority unless the drugs were prescribed for an injury or illness that is work-related.

1.4.17. Hospitalization for treatment where the patient is retained beyond the day of admission solely for administrative reasons.

1.4.17.1. Hospitalization for observation or administrative reasons not related to the immediate injury or occupational illness.

1.4.17.2. Observation and/or Diagnostic Procedure. Hospitalization or restriction from assigned work activities for observation or diagnosis is not a "lost time case," "no lost time case," or "first aid case" provided no treatment or medication is given for the suspected injury or occupational illness and competent medical authority determines the individual could have returned to his or her normal job without impairment or disability. This classification also applies where an individual

is temporarily restricted from regularly assigned duties to prevent exceeding time-weighted exposure limits.

1.4.18. Death due to natural causes that is unrelated to the work environment. NOTE: However, the following deaths by natural causes must be reported under this AFI:

1.4.18.1. An aircrew member during flight.

1.4.18.2. A missile crewmember on alert.

1.4.18.3. A training-related death.

1.4.19. Death or injury resulting solely from illegal use of drugs or other substances unless occurring in the work environment.

1.4.20. Attempted or consummated suicide or intentionally self-inflicted injuries.

1.5. Work-Relatedness. You must consider an injury or illness to be work-related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing injury or illness. Work-relatedness is presumed for injuries and illnesses resulting from events or exposures occurring in the work environment, unless an exception in 29 CFR 1904.5(b)(2) specifically applies.

1.5.1. Injuries or illnesses will not be considered work-related if, at the time of the injury or illness, the employee was present in the work environment as a member of the general public rather than as an employee.

1.5.2. Injuries or illnesses will not be considered work-related if they involve symptoms that surface at work but result solely from a non-work-related event or exposure that occurs outside the work environment.

1.5.3. Injuries and illnesses will not be considered work-related if they are solely the result of employees doing personal tasks (unrelated to their employment) at the establishment outside of their assigned working hours.

1.5.4. Injuries and illnesses will not be considered work-related if they are solely the result of personal grooming, self-medication for a non-work-related condition, or are intentionally self-inflicted.

1.5.5. Common colds and flu will not be considered work-related even if contracted while the employee was at work. However, in the case of other infectious diseases such as tuberculosis, brucellosis, and hepatitis C, employers must evaluate reports of such illnesses for work relationship, just as they would any other type of injury or illness.

1.5.6. Mental illness will not be considered work-related unless the employee voluntarily provides the employer with an opinion from a physician or other licensed health care professional with appropriate training and experience (psychiatrist, psychologist, psychiatric nurse practitioner, etc.) stating that the employee has a mental illness that is work-related.

1.6. Acting on Critical Safety Information. If safety personnel or investigators discover information that seriously impacts the operations of a weapons system, the continuation of an exercise, or other operations, they must immediately notify the convening authority by telephone and follow up with a confirming e-mail, regardless of whether or not such information is associated with a mishap currently under investigation. Convening Authority Safety Offices will take action IAW paragraph **2.6.7.**

1.7. Accounting for Losses. The Air Force records each mishap to the command (MAJCOM) that experienced the loss or a majority of the loss of an owned asset (personnel or property). For statistical purposes, the occurrence is recorded as a mishap in that command (or in the Air Force at large, when applicable) regardless of any determination as to the responsibility for the mishap. Generally, the mishap is recorded in the command that has investigative responsibility for the mishap (**Chapter 4**). Mishap accounting in no way implies blame or mishap responsibility. NOTE: For purposes of this instruction, the term "MAJCOM" includes ANG, Direct Reporting Units (DRUs), and Forward Operating Agencies (FOAs).

1.7.1. For all engine-confined non-FOD mishaps, the mishap accounting organization is assigned to the "Air Force at large."

1.8. Mishap Categories. The Air Force categorizes mishaps based upon the material involved (e.g., space systems, weapons, aircraft, motor vehicles, person, etc.) and the state of the involved material (e.g., launch, orbit, existence of intent for flight, on- or off-duty, etc.) when the mishap occurs. Mishap categories and subcategories are defined below and diagramed in **Figure 1.1.** For the purposes of reporting and data collection, select the one category and subcategory that best defines the mishap under investigation using the order of precedence in paragraph **1.8.1.** Normally mishaps involve only one category and subcategory; see paragraph **1.8.3.**

1.8.1. Specific Mishap Categories.

1.8.1.1. Nuclear. An Air Force mishap involving a nuclear weapon system, nuclear reactor, or other radioactive material.

1.8.1.1.1. Nuclear Weapon System. A mishap that involves destruction of, or serious damage to, nuclear weapons, nuclear weapons systems, or nuclear weapons components, resulting in an actual or potential threat to national security or life and property. Reportable nuclear surety violations and damage to support equipment listed in the Air Force Master Nuclear Certification List (MNCL) will be reported under this subcategory.

1.8.1.1.2. Reactor. Mishaps involving fissile material used in a self-supporting chain reaction (i.e., nuclear fission) to produce heat and/or radiation for both practical application and research and development.

1.8.1.1.3. Radiological. Mishaps involving radioactive material not related to a nuclear weapon or fissile radioactive material.

1.8.1.2. Space. An Air Force mishap involving a space system and/or ground based space systems. Refer to AFMAN 91-222 for reporting and investigation requirements.

1.8.1.2.1. Development/Testing/Pre-Launch. Space mishaps occurring during development, pre-operational testing, ground handling, processing, transportation operations, or involving launch vehicles or spacecraft prior to launch (T=0).

1.8.1.2.2. Launch/Range. Space mishaps involving launch vehicle operations (after T=0), including upper stages, or involving range support equipment. This includes payloads that do not obtain orbit, range safety system failures, and range support failures.

1.8.1.2.3. Orbital Mishaps. All mishaps that occur after successful separation from all launch vehicle components, including upper stages and transfer/kick motors, are considered orbital mishaps. Refer to AFMAN 91-222 for reporting and investigation requirements.

1.8.1.2.4. Ground Based Space Systems. Space mishaps involving ground based space systems not involved with supporting launch or orbital operations.

1.8.1.2.5. Cross Categories.

1.8.1.2.5.1. High Altitude Operations (HAO). Due to the similarities with small satellite payloads, a mishap involving a HAO payload should be investigated as a joint aviation/space mishap.

1.8.1.2.5.2. Directed Energy (DE). Mishaps involving directed energy systems that illuminate, interfere, damage or destroy a space system should be investigated as a joint directed energy/space mishap.

1.8.1.3. Aviation. An Air Force mishap involving a DoD aircraft or DoD UAV/UAS.

1.8.1.3.1. Aircraft Flight. Any mishap in which there is intent for flight and reportable damage to a DoD aircraft. Explosives and chemical agents or guided missile mishaps that cause damage in excess of $20,000 to a DoD aircraft with intent for flight, as defined in this instruction, are categorized as aircraft flight mishaps to avoid dual reporting. This is the only aviation mishap subcategory that contributes to the flight mishap rate.

1.8.1.3.2. Aircraft Flight-Related. Any mishap in which there is intent for flight and no reportable damage to the DoD aircraft itself, but the mishap involves a fatality, reportable injury, or reportable property damage. Parachuting injuries fall under this subcategory (refer to paragraph **4.4.** and **Attachment 6** for mishaps involved multiple services). A missile or UAV/UAS that is launched from a DoD aircraft, departs without damaging the aircraft, and is subsequently involved in a DoD mishap is reportable as a guided missile mishap or UAV/UAS mishap, respectively.

1.8.1.3.3. Aircraft Ground Operations (AGO) mishap or event (Non-Flight Rate Producing). Aircraft Ground Operations are mishaps that involve DoD aircraft with no intent for flight that result in reportable damage to DoD aircraft, injury, or fatality.

1.8.1.3.3.1. The Convening Authority will determine the size and scope of the safety investigation and appoint appropriate members to the SIB or a single investigator IAW the AFMAN 91-223 or AFMAN 91-224 guidance.

1.8.1.3.3.2. Generally, mishaps involving maintenance will use AFMAN 91-224 procedures and mishaps involving operations (ex: taxi mishap) will use AFMAN 91-223 procedures. The Convening Authority will determine which procedures are more appropriate. AFMAN 91-224 investigations will be cross-categorized as Ground and Industrial, Industrial mishaps.

1.8.1.3.3.3. Damage to a missile prior to the completion of weapons upload procedures, or after initiation of weapons download is a Missile mishap.

1.8.1.3.3.4. Damage to an aircraft, when it is being handled as a commodity or cargo, is not reportable as an aircraft accident.

1.8.1.3.4. UAV/UAS. Any mishap involving a DoD UAV/UAS as defined in this instruction, but not involving another DoD aircraft. Damage to a DoD UAV/UAS, when it is being handled as cargo, is a ground and industrial mishap.

NOTE: If damage is first discovered during inspection or maintenance, determine the most likely time of occurrence and corresponding subcategory.

1.8.1.4. Guided Missile, including Ground Launched Missile. An Air Force mishap involving guided missiles or unique missile support equipment. Missiles that are unintentionally damaged or destroyed after launch from an aircraft, but cause no aircraft damage, will be classified as a guided missile mishap.

1.8.1.5. Explosives and Chemical Agents. An Air Force mishap fitting one of the subcategories below.

1.8.1.5.1. Explosives. An on-duty mishap involving DoD-owned explosive items resulting in damage to, or damage or injury meeting reportable criteria caused by:

1.8.1.5.1.1. An explosion or functioning of explosive materials or devices (except as a result of enemy action) to include small arms (50 Cal or less). Unintentional discharges of small arms ammunition where the round and weapon functioned as designed and no injuries or property damage were involved are not reportable under this manual unless circumstances support a Class E HAP. Mishaps not meeting reportable mishap criteria will still be investigated for Class E HAP consideration. For example: carts fire with no damage, however the investigation reveals a bad micro-switch or needed procedural changes. Small arms accidental discharges which result in injury or reportable property damage will be reported as explosive mishaps, per the mishap category hierarchy. In the event of death, if the provisions of AFMAN 91-224 are more applicable, the MAJCOM may request the use of AFMAN 91-224 to investigate and report the mishap. The convening authority will appoint the appropriate safety expertise to investigate.

1.8.1.5.1.2. Inadvertent actuation, jettisoning, releasing or launching of explosive devices.

1.8.1.5.1.3. Impacts of ordnance off-range.

1.8.1.5.2. Chemical Agent. Any unintentional or uncontrolled release of a chemical agent when:

1.8.1.5.2.1. Reportable damage occurs to property from contamination or costs are incurred for decontamination.

1.8.1.5.2.2. Individuals exhibit physiological symptoms of agent exposure.

1.8.1.5.2.3. The agent quantity released to the atmosphere is such that a serious potential for exposure is created by exceeding the applicable maximum allowable concentration-time levels for exposure of unprotected workers or the general population or property.

1.8.1.6. Directed Energy. An Air Force mishap fitting one of the subcategories below.

1.8.1.6.1. Directed Energy Weapon. A mishap involving a directed energy weapon and/or unique directed energy weapon support equipment.

1.8.1.6.2. Directed Energy Device. A mishap involving a directed energy device. An example would be damage to an optical device by an aircraft laser range finder.

1.8.1.7. Afloat. An Air Force mishap occurring on board, or as the result of, a DoD vessel. This also includes DoD diving or swimmer operations. This term includes mishaps occurring while loading and/or off-loading or receiving services at dockside and mishaps occurring up to the high

water mark during amphibious or inshore warfare training operations. It applies also to all injuries to DoD personnel occurring on board, whether or not job-related. Fatalities and/or injuries occurring on board that result from shipyard, repair facility, or private contractor operations are not afloat mishaps.

1.8.1.8. Motor Vehicle. An Air Force mishap involving the operation of a motorized land vehicle operated by Air Force personnel. An Air Force mishap involving the operation of a DoD-owned or leased motorized land vehicle by non-Air Force personnel while operationally controlled by a DoD component. The above are all categorized as a motor vehicle mishap. Fatalities or injuries to pedestrians or bicyclists involving moving motor vehicles are included in this category. This category does not include ground and industrial mishaps such as injuries occurring while loading or unloading, mounting or dismounting a non-moving vehicle; cargo damaged by weather; damage to a properly parked DoD vehicle, unless caused by an operating DoD vehicle. Additionally, damage to an Air Force vehicle caused by objects thrown or propelled into it by weather or natural phenomena, or by fire when no collision occurred or damage to an Air Force vehicle when it is being handled as cargo and not operating under its own power and is properly parked, are not categorized as motor vehicle mishaps. Motor vehicle mishaps are divided into the following subcategories:

1.8.1.8.1. Government Motor Vehicle (GMV). A motor vehicle mishap involving the operation of a GMV as defined in this instruction.

1.8.1.8.2. Private Motor Vehicle (PMV). A motor vehicle mishap, regardless of the identity of the operator, that does not involve a GMV but results in a fatality or lost time case injury (involving days away from work) to military personnel on- or off-duty or to on-duty civilian personnel, or reportable damage to DoD property. Fatalities and injuries to bicyclists and pedestrians in the traffic environment are included in this category.

1.8.1.9. Ground and Industrial. An Air Force mishap that occurs to on-duty DoD civilian or on- or off-duty DoD military personnel and does not meet the mishap category definition of nuclear, space, aviation (except as required in paragraph **1.8.1.3.3.**), guided missile, explosives and chemical agents, directed energy, afloat, or motor vehicle as defined by this instruction. NOTE: A mishap involving both on- and off-duty military personnel is categorized as an on-duty mishap. This category also includes old ground mishaps categories such as fire, combat training, physical and athletic conditioning, contractor, and natural phenomena. These categories have been replaced with questions in Air Force Safety Automated System (AFSAS).

1.8.1.9.1. Industrial. A ground and industrial mishap that occurs in the work environment. This also includes categories for fire, combat training, and natural phenomena. This category also includes inadvertent releases of Class I Ozone Depleting Substances (ODS). (The work environment, as defined in 29 Code of Federal Regulations 1960, is "The establishment and other locations where one or more Air Force employees are working or are present as a condition of their employment; this would include those areas or locations where persons are TDY for training purposes. The work environment includes not only physical locations, but also the equipment or materials used by the employee during the course of his or her work.")

1.8.1.9.2. Sports and Recreational. Mishaps involving injuries that occur during participation in some form of recreational or athletic activities. The activity may be for leisure, designed to

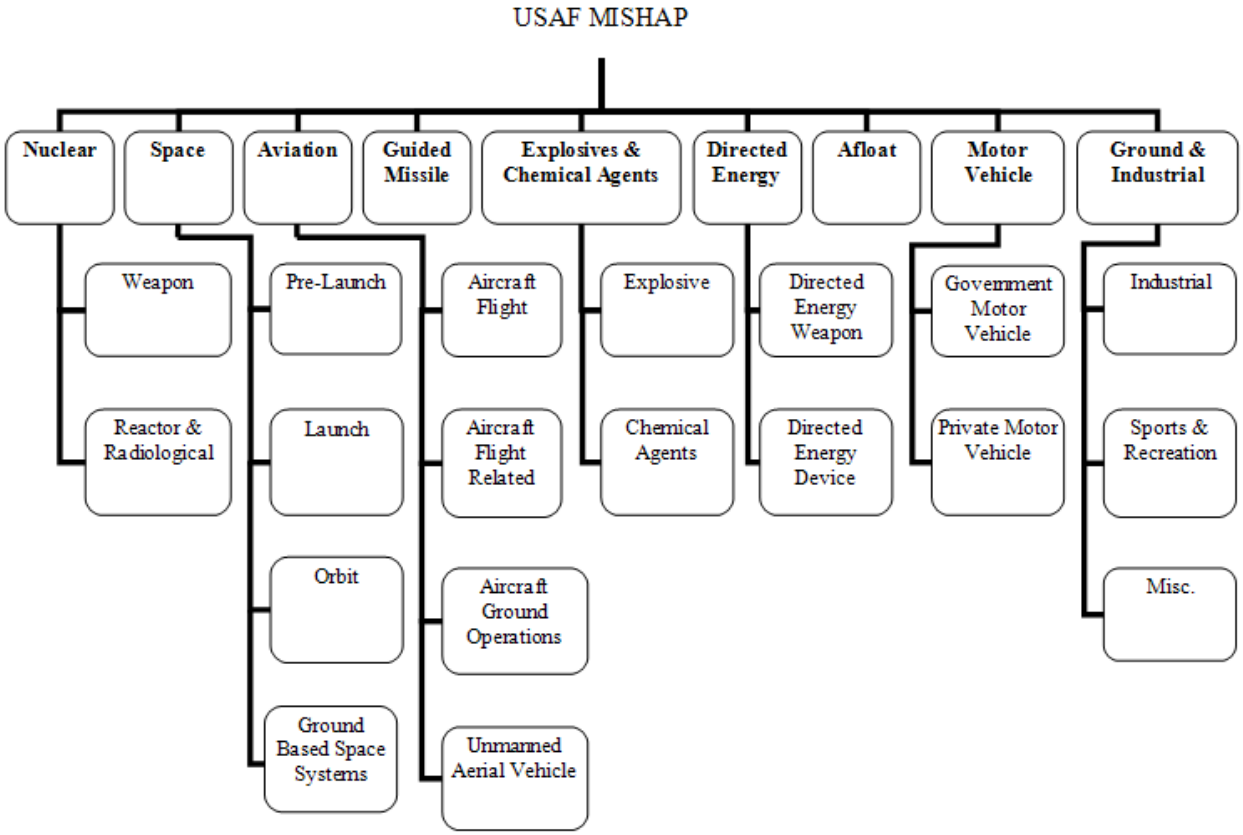
develop an Air Force member's physical ability or to maintain or increase individual/collective combat and/or peacekeeping skills (see Training Related Death, **Attachment 1**).

1.8.1.9.3. Miscellaneous. On- or off-duty mishaps that do not fit into the industrial or sports and recreational subcategory. Also included in this subcategory are reportable mishaps occurring while using a commercial carrier such as a commercial bus, airplane, or taxicab.

1.8.2. Multiple Occurrence Mishaps. Damaging occurrences that happen in logical succession are considered to occur in a single mishap and will result in a single safety investigation, unless there is clearly no possible initiating or sustaining relationship between occurrences. For example, an emergency vehicle responding to a mishap that collides with another motor vehicle is a separate mishap. MAJCOM/SE should contact AF/SE for resolution of questions regarding whether occurrences constitute a single or separate mishaps.

1.8.3. USAF Mishaps Involving Multiple Categories. Occasionally mishaps have characteristics that relate to two or more mishap categories. For the primary category/subcategory, the mishap must meet the category definition in its entirety. For mishaps that completely meet more than one category definition, use the hierarchy in paragraph **1.8.** and **Figure 1.1.** to select the primary category, and select the other categories as cross-categories. If a mishap relates to a category definition, but does not completely meet the definition, up to two related cross-categories/subcategories may be selected. For example, an inadvertent release of a conventional weapon from an aircraft in flight that does not damage the aircraft would be categorized as an aviation/aircraft flight-related mishap with, explosives and chemical agents/explosives cross-category.

Figure 1.1. Mishap categories



1.9. Non-USAF Mishaps. Periodically the Air Force investigates mishaps that do not fit the definition of an Air Force mishap. The Air Force generally investigates non-USAF mishaps because of an existing agreement with the involved party or because it has unique expertise or interest in the mishap, and has agreed to lead an investigation. For example, the Air Force, by way of an existing Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU), may have previously agreed to investigate any mishap involving the equipment of a foreign nation occurring on US soil. Non-USAF mishap categories are defined below and diagramed in **Figure 1.2.** For the purposes of reporting and data collection, select the one category that best defines the mishap under investigation. NOTE: Non-USAF mishaps fall into one of three categories while USAF mishaps fall into one of ten DoD categories previously discussed in paragraph **1.7.** and diagramed in **Figure 1.1.**

1.9.1. Non-USAF Aviation. Aviation mishaps involving:

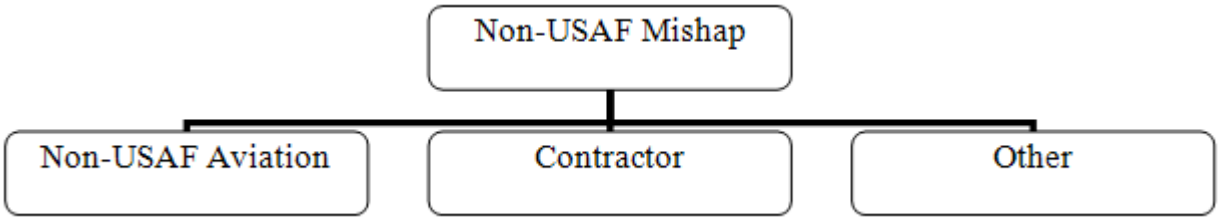
1.9.1.1. A non-DoD aircraft or non-DoD UAV/UAS, regardless of the existence of intent for flight, which only results in damage to non-USAF equipment or injury to non-USAF personnel. An Air Force pilot who is uninjured during a successful ejection from a foreign-owned, single-seat fighter that is subsequently destroyed is categorized as a non-USAF aviation mishap since there was no damage to Air Force equipment or injury to Air Force personnel.

1.9.1.2. A DoD aircraft or DoD UAV/UAS, regardless of the existence of intent for flight, resulting in damage or injury to the Air Force (paragraph **1.3.1.1.**) and another DoD component is responsible for reporting. An Air Force person killed in an aircraft belonging to another DoD component typically would be investigated and reported by the DoD component owning the aircraft. However, if the Air Force wrote its own limited report, usually to document and report the loss of life, it would be categorized as a non-USAF aviation mishap.

1.9.2. Contractor. Instances where contractor operations on government property during the execution of a government contract result in significant damage to contractor-owned equipment or injury to contract employees but not reportable damage to DoD property or injury to DoD personnel.

1.9.3. Other. Mishaps that do not fit into the non-USAF aviation or contractor categories.

Figure 1.2. Non-USAF Mishap categories



1.10. Mishap and Event Classifications. Classify mishaps by total direct mishap cost and the severity of injury/occupational illness. EXCEPTION: Classify Class D mishaps and Class E events according to the definitions below. Calculate direct cost of a mishap IAW paragraph **1.11.** NOTE: Severity of injury/occupational illness, not injury/occupational cost, is used to classify mishaps.

1.10.1. Class A Mishap. A mishap resulting in one or more of the following:

1.10.1.1. Direct mishap cost totaling $1,000,000 or more.

1.10.1.2. A fatality or permanent total disability.

1.10.1.3. Destruction of a DoD aircraft (**Attachment 1**). NOTE: A destroyed UAV/UAS is not a Class A mishap unless the criteria in paragraphs **1.10.1.1.** or **1.10.1.2.** are met.

1.10.2. Class B Mishap. A mishap resulting in one or more of the following:

1.10.2.1. Direct mishap cost totaling $200,000 or more but less than $1,000,000.

1.10.2.2. A permanent partial disability.

1.10.2.3. Inpatient hospitalization of three or more personnel. Do not count or include individuals hospitalized for observation, diagnostic, or administrative purposes that were treated and released.

1.10.3. Class C Mishap. A mishap resulting in one or more of the following:

1.10.3.1. Direct mishap cost totaling $20,000 or more but less than $200,000.

1.10.3.2. Any injury or occupational illness or disease that causes loss of one or more days away from work beyond the day or shift it occurred. When determining if the mishap is a Lost Time Case, you must count the number of days the employee was unable to work as a result of the injury or illness, regardless of whether or not the person was scheduled to work on those days. Weekend days, holidays, vacation days, or other days off are included in the total number of days, if the employee would not have been able to work on those days. Injuries or illnesses resulting from an employee eating, drinking, or preparing food for personal consumption are not reportable unless the employee is made ill by ingesting food contaminated by workplace contaminants (such as lead) or gets food poisoning from food supplied by the employer. **NOTE:** Occurrences that result from voluntary participation in wellness and fitness programs, or recreational activities such as exercise class, racquetball, or baseball will be reported as required by appropriate mishap class determination and to comply with DODI 6055.07 paragraphs 5.2.1 and E2.1.38.1

1.10.3.3. An occupational injury or illness resulting in permanent change of job.

1.10.4. Class D Mishap. Any nonfatal injury or occupational illness that does not meet the definition of **Lost Time**. These are cases where, because of injury or occupational illness, the employee only works partial days, has restricted duties or was transferred to another job, required medical treatment greater than first aid, or experienced loss of consciousness (does not include GLOC). In addition, a significant injury (e.g. fractured/cracked bone, punctured eardrum) or occupational illness (e.g. occupational cancer (mesothelioma), chronic irreversible disease (beryllium disease)) diagnosed by a physician or other licensed health care professional must be reported even if it does not result in death, days away from work, restricted work, job transfer, medical treatment greater than first aid, or loss of consciousness. **NOTE:** Occurrences that result from voluntary participation in wellness and fitness programs, or recreational activities such as exercise class, racquetball, or baseball will be reported to comply with DODI 6055.7 paragraphs 5.2.1 and E2.1.38.1. A duty classification of Duties Not Including Flying (DNIF) alone that does not affect the unit's flying schedule does not require reporting as a Class D mishap (i.e. a sprained toe that was buddy taped (does not meet criteria for medical treatment greater than first aid), no lost duty time, person is DNIF, is not reportable) unless other reporting criteria are met.

1.10.5. Class E Events. These occurrences do not meet reportable mishap classification criteria, but are deemed important to investigate/report for mishap prevention. Class E reports provide an expeditious way to disseminate valuable mishap prevention information.

1.10.5.1. Hazardous Air Traffic Report (HATR) Events. Any air traffic or hazardous movement area occurrence that endangers the safety of an aircraft or UAV/UAS.

1.10.5.2. High Accident Potential (HAP) Events. Any hazardous occurrence that has a high potential for becoming a mishap that does not fit the definition of a HATR.

1.10.5.3. Wildlife Strike (BASH) Events. Any wildlife strike to an aircraft or UAV/UAS that does not meet Class A, B, or C mishap reporting criteria.

1.10.5.4. Property Damage Events (Non Aviation). Mishaps that do not have an injury or illness and the direct cost is totaling $2,000 or more but less than $20,000.

1.10.5.5. Physiological Events. Report episodes of abnormal physical, mental or behavioral conditions or symptoms. See AFMAN 91-22X for specifics.

1.10.5.6. Laser or Radio Frequency (RFR) incidents or accidents. All incidents or accidents involving alleged or suspected exposures of laser radiation need to be investigated according to AFOSH Std 48-139 *Laser Radiation Protection Program* paragraph 2.6, immediately reported via the Laser Injury Hotline (1-800-473-3549 or DSN 240-4784) and reported in AFSAS. Similarly, alleged or suspected RFR exposures in excess of exposure limits will be investigated and reported as prescribed in AFOSH 48-9, and reported in AFSAS.

1.10.5.7. Other occurrences as directed in the discipline specific safety manuals (AFMAN 91-22X).

1.11. Mishap Costs. It is DoD policy to determine the total direct mishap cost in order to provide a factual basis for the allocation of resources in support of DoD mishap prevention programs. Direct mishap costs ONLY include property damage costs (DoD and Non-DoD), associated repair labor costs, and environmental cleanup costs. The direct cost does not include the cost of implementing corrective actions. All other costs (ex: investigation and transportation costs) are indirect costs.

1.11.1. Determining DoD Property Damage Costs. This includes damage or loss of material and the cost of labor to repair material.

1.11.1.1. Field Level Repair.

1.11.1.1.1. Materiel Cost. If an item is repaired locally by unit personnel, calculate the cost of the materiel used to repair the item. When determining the cost of Class I Ozone Depleting Substances (ODS), use the value of $100.00 per pound for the inadvertent release of Class I ODSs.

1.11.1.1.2. DoD Labor Costs (DoD military and civilian personnel). Determine the number of hours of labor to repair the damaged materiel. Obtain the field level hourly rate from: **http://afsafety.af.mil/**, Labor Rates for Safety Reporting. Multiply the number of hours of labor expended by DoD personnel by the hourly rate.

1.11.1.1.3. Contractor Repairs. Use the actual cost charged to the government for repairs performed by contractors. Costs to repair damage must be reported even if the Air Force is reimbursed or if the repair is accomplished under warranty. If the contractor considers itemized costs to be proprietary information, request and report only the sum total. Contact the Single Manager (SM) for assistance in obtaining contractor repair costs.

1.11.1.2. Depot Level Repair.

1.11.1.2.1. Materiel. Obtain the exchange cost for each stocklisted item requiring depot level repair from the Air Force Master Item Identification Data Base (D043A). If the item is not stock listed, contact the SM. If the sum total of the exchange costs is equal to or greater than $1,000,000, obtain an estimated cost of repair based upon actual damage from the depot/repair facility. Report this estimated cost. If the depot/repair facility cannot provide an estimated cost of repair based upon actual damage, revert to using exchange cost from D043A. If the sum total of the exchange costs is less than $1,000,000, report this cost. The Base Supply Representative has access to D043A. Exception: If the sum total of the exchange costs for FOD is equal to or greater than $1,000,000, a depot/repair facility estimated cost based on field damage description may be reported.

1.11.1.2.2. Depot Labor Costs. Determine the number of hours of labor to repair the damaged materiel. Obtain the depot level hourly rate from: **http://afsafety.af.mil/**, Labor Rates for Safety Reporting. Multiply the number of hours of labor expended by depot personnel by the hourly rate.

1.11.1.2.3. Contractor Repairs. Use the actual cost charged to the government for repairs performed by contractors. Costs to repair damage must be reported even if the Air Force is reimbursed or if the repair is accomplished under warranty. If the contractor considers itemized costs to be proprietary information, request and report only the sum total. Contact the Single Manager (SM) for assistance in obtaining contractor repair costs.

1.11.2. Destroyed Assets.

1.11.2.1. Determining destroyed conventional aircraft/UAV/UAS cost. If the aircraft/UAV/UAS is destroyed, obtain flyaway cost from the Air Force Cost Analysis Agency (AFCAA/FMS) at DSN 664-0409 or Commercial 703-604-0409. Get the unit flyaway cost and contact the SM to get the cost of all modifications done to the aircraft/UAV/UAS up to the mishap date. NOTE: An aircraft/UAV/UAS that is damaged but will not be repaired is not automatically a destroyed aircraft/UAV/UAS. In this case, calculate repair cost IAW paragraphs **1.11.1.1.** and/or **1.11.1.2.**

1.11.2.2. Other destroyed or lost assets with no item to exchange. Use the standard (unit) cost from D043A or the SM. The Base Supply Representative has access to D043A.

1.11.3. Determining Costs to Non-DoD Property Damage. If Air Force operations result in damage of non-DOD property, calculate and report the damage cost. Determine non-DOD property damage costs using official estimates, such as from security police reports, civil police reports, and/or logistics readiness offices.

1.11.4. Determining Environmental Clean-Up Costs. Obtain these costs from the local civil engineering environmental section. The end cost of this type of clean up may not be available inside the nominal 30 day investigation timeframe. Use the best estimate available at the time of the final message. Environmental clean-up costs include costs for:

1.11.4.1. Clean up.

1.11.4.2. Environmental decontamination.

1.11.4.3. Restoration of private and government property.

1.12. Mishap Injury and Occupational Illnesses. Report the type of person (paragraph **1.12.1.**) and the severity of injury/occupational illness (paragraph **1.12.2.**).

1.12.1. Type of person: rated officer, nonrated officer, enlisted, cadet, DoD civilian, DoD contractor, Foreign Nationals, or non-DoD civilian. NOTE: Foreign Nationals include military (rated or non-rated) officer, military enlisted, or civilian.

1.12.2. Severity of injury or occupational illnesses: fatality, permanent total disability, permanent partial disability, lost time case, or no lost time case. (See **Attachment 1** for definitions.) For lost time cases, also report the number of days hospitalized and the number of days of lost time beyond the days hospitalized. In cases when the actual number of days hospitalized or lost time is not known at the time the safety report is submitted, the best official estimates made by a competent medical authority will be used.

1.13. Recording Injuries and Occupational Illnesses. Use AFSAS to create the OSHA Form 300, *Log of Work-Related Injuries and Illnesses*, for recording injuries and occupational illnesses to civilian and military personnel meeting Class A, B, C, or D criteria. See AFMAN 91-224, Chapter 6, for specific guidance. **Note**. Military and civilian personnel are recorded on separate logs.

1.13.1. Contractor employees hired by the Air Force via a non-personal services contract, as defined by Federal Acquisition Regulation (FAR) 37.101, are under the contractor's day-to-day supervision. The contractor, not the Air Force, will be responsible for reporting contractor injuries and illnesses to the Occupational Safety and Health Administration (OSHA), even if the contractor's employees are co-located with an Air Force organization.

1.13.2. Contractor employees hired under a personal services contract, as defined by FAR 37.104, are under the day-to-day supervision of the Government and its employees. The Air Force will be responsible for reporting injuries to these contractor employees

1.13.3. If uncertain as to the type of contract employee, contact the Contracting Officer.

1.14. Obtaining and Using Health Information.

1.14.1. Health Insurance Portability and Accountability Act of 1996 (HIPAA). DoD Regulation 6025.18-R, *DoD Health Information Privacy Regulation,* implements Public Law 104-191, HIPAA within the DoD. Mishap investigation and reporting requires the gathering and limited distribution of specific protected health information as defined by HIPAA.

1.14.2. Safety officials at all levels are responsible to establish a liaison with the installation medical agencies to ensure an information flow has been established (see paragraph **2.3.**). DoD Regulation 6025.18-R, Chapter 7, provides for release of information for safety related mishap investigation and reporting as required by law, as defined in DoD Regulation 6025.18-R paragraph DL1.1.31. For questions on medical information release consult with the servicing Medical Law Consultant.

1.14.3. Safeguarding Protected Information. Disclosure rules are identified in DoD Regulation 6025.18-R, Chapter 8.

1.14.4. HIPAA applies specifically to information released or received by medical authorities. Medical authorities may disclose protected health information to the extent necessary to comply with laws relating to workers' compensation or other similar programs. It does not preclude the employee from providing medical information to their supervisor, management or the installation Compensation Program Administrator.

1.14.5. The Installation Compensation Program Administrator (ICPA) will provide injury and illness information to Ground Safety in a prompt fashion using appropriate, secure electronic systems such as Safety and Fitness Electronic Records (SaFER).

1.15. Delegation. Unless specifically prohibited, all DODI 6055.07, *Accident Investigation, Reporting, and Record Keeping*, safety responsibilities assigned to the secretary of the Air Force, are delegated in the Air Force to the Chief of Safety

Chapter 2

RESPONSIBILITIES

2.1. General Information. The guidelines in this chapter establish investigating and reporting responsibilities for Air Force mishaps and events.

2.2. The Air Force Chief of Safety (AF/SE) will:

2.2.1. Establish requirements and policies to ensure Air Force mishaps are reported and investigated IAW AFPD 91-2.

2.2.2. Establish requirements and policies to ensure Air Force mishaps, events, and other information that may serve as mishap precursors are reported and investigated sufficiently to serve the needs of a robust mishap prevention program.

2.2.3. Provide technical and investigative expertise to safety investigations as directed by this instruction.

2.2.4. Establish policies and programs to validate the results of safety investigations and to manage Class A and B safety investigation primary recommendations to their appropriate conclusions. Determine whether to close recommendations or leave them open for future action.

2.2.5. Maintain records of Air Force safety investigations as directed by Public Law and as necessary for Air Force mishap prevention purposes.

2.2.6. Establish policies and procedures to release safety investigation information to agencies outside Air Force safety channels.

2.2.7. Prepare a Memorandum of Final Evaluation (MOFE) on on-duty Class A and select B mishaps. Ensure MOFE is disseminated to MAJCOM/SEs.

2.2.8. Develop joint and combined investigation policy or doctrine in coordination with other services and nations.

2.3. The Air Force Surgeon General (AF/SG) will ensure medical personnel provide, to appropriate individuals investigating a mishap, medical information related and relevant to the investigation, in support of Air Force mishap investigations.

2.4. MAJCOM Commanders will: (NOTE: For purposes of this instruction, the term "MAJCOM" includes ANG, DRUs, and FOAs).

2.4.1. Establish policies and procedures to ensure mishaps assigned under the provisions of this instruction are properly investigated and reported.

2.4.2. Establish policies and programs to validate the results of safety investigations and track safety investigation recommendations to their appropriate conclusions.

2.4.3. Ensure action is taken on all open recommendations on which the command is the action agency.

2.4.4. Ensure all appropriate agencies and organizations within their command review each MOFE, to determine whether any of the deficiencies leading to the mishap apply to their commands.

2.4.5. Ensure all mishaps that occur from operations of government contractors which result in reportable damage or injury to the Air Force (paragraph **1.3.**), even if the government is wholly or partially repaid, are investigated and reported according to this instruction, AFI 10-220(I), *Contractor's Flight and Ground Operations,* and AFPAM 91-210, *Contract Safety.* This includes non-accepted equipment (non-delivered equipment for which the Government has assumed responsibility) where a DD Form 250, *Material Inspection and Receiving Report,* has not been executed.

2.4.6. Ensure government contracts/lease agreements specify convening authority prior to executing the contract/lease agreement.

2.4.6.1. The contract/lease agreement will ensure:

2.4.6.1.1. The contractor will notify the Air Force and the contract management authority when reportable damage or injury to the Air Force (paragraph **1.3.**) occurs.

2.4.6.1.2. The contractor and subcontractors will support and comply with the safety investigation and formal safety report requirements of this instruction.

2.4.6.1.3. A record of all mishaps involving Air Force resources will be entered into the Air Force Safety Automated System (AFSAS). This record includes required safety reports submitted IAW this instruction.

2.4.6.1.4. A record of mishaps involving other DoD resources will be forwarded to the involved agencies with an information copy to AF/SE. This record includes all mishap information.

2.4.6.1.5. When a mishap involves a contract managed by the Defense Contract Management Agency (DCMA), DCMA safety personnel will review the final message safety report and send their response back to AFSC (paragraphs **7.2.** and **7.2.3.**).

2.4.6.1.6. The contractors and subcontractors will immediately comply with required toxicology testing and provide required medical information/records to the Medical Officer in the event of an Air Force mishap.

2.4.7. Ensure contract/lease agreements for aerospace vehicles state: The Air Force is responsible for the investigation of mishaps involving aerospace vehicles. The Air Force is authorized to investigate mishaps involving non-accepted Air Force aerospace vehicles.

2.4.8. Notify Air Force Nuclear Weapons Center and the Defense Threat Reduction Agency Nuclear Surety Office if nuclear weapon mishaps require design agency evaluation.

2.4.9. Report significant events or trends that could have adverse effects on nuclear safety, security, or reliability of nuclear weapons systems.

2.5. AFMC and AFSPC Commanders (in addition to MAJCOM/CC Requirements) will:

2.5.1. Provide cost analysis data to support Air Force safety investigations. Ensure engine, engine module, and shop replacement unit (SRU) mishap cost data (material and labor) is provided to the safety investigator within 15 days for Class A mishaps and within 30 days for all other mishap classes. The 15 and 30 day timelines begin when the depot receives the requested information/material.

2.5.2. Provide verbal and written technical assistance in response to Mishap/High Accident Potential (MHAP) Deficiency Reports (DRs) to support Air Force safety investigations. Ensure all exhibit tear-

down and/or technical reports are provided to the safety investigator within 15 days for a Category I MHAP DR and 30 days for a Category II MHAP DR. The 15 and 30 day timelines begin upon depot induction of the exhibit. Category I MHAP DRs are normally submitted for Class A mishaps and Category II MHAP DRs are normally submitted for Class B and C mishaps. See TO 00-35D-54 for more information.

2.5.3. Ensure the appropriate Single Manager (SM) for the weapon system or items involved receives and reviews MOFEs applicable to his/her systems and initiates publications or hardware changes as required. Maximize mishap prevention by transferring useful information from one weapon system to another.

2.6. The Convening Authority chosen IAW Chapter 4 will:

2.6.1. Determine the scope and size of the safety investigation.

2.6.2. Ensure ongoing safety investigations issue required safety reports IAW **Table 6.2.**

2.6.3. Ensure all safety reports prepared and transmitted via password protected e-mail/attachment or the Automated Message Handling System (AMHS), when AFSAS is not available (paragraph **6.1.**), are entered into AFSAS as soon as possible. This includes changes made to safety reports.

2.6.4. Ensure safety investigations cover all relevant mishap factors and meet the requirements of the Air Force mishap prevention program.

2.6.5. Forward formal safety reports. If more information is found after a formal report has been submitted, the convening authority will send this information to the same addressees who received the formal report.

2.6.6. Authorize the release of non-privileged non-Privacy Act information to news media, relatives, and other agencies through the legal board president, Survivor Assistance Program point of contact, Family Liaison Officer, or Public Affairs representative as appropriate.

2.6.7. Upon receiving notification of a critical safety concern (paragraph **1.6.**), take the following actions:

2.6.7.1. Notify other action agencies, the appropriate SM for the weapon system or items involved, the weapons system lead command, (AFPD 10-9, *Lead Operating Command Weapon Systems Management)* and AFSC. These action agencies must evaluate the nature and seriousness of the information, determine the proper response, and issue required instructions.

2.6.7.2. Ensure the SM has access to specific technical information and other critical information as it becomes available so the SM can meet Operational Safety, Suitability, and Effectiveness (OSS&E) responsibilities required by AFI 63-1201, *Life Cycle Systems Engineering.*

2.6.7.3. Ensure originating units send critical safety hazard information to appropriate agencies IAW AFI 11-215, *Flight Manuals Program (FMP)*, and TO 00-5-1, *AF Technical Order System*.

2.6.7.4. Forward to AFSC/SEF as quickly as practical all critical safety information related to military variants of civil aircraft and commercial off-the-shelf aircraft. AFSC/SEF will ensure all such information contributing to the promotion of aviation safety is forwarded to the Administrator of the Federal Aviation Administration and/or the Chairperson of the National Transportation Safety Board for appropriate action.

2.7. The Commander of the Active Duty Air Force installation nearest a mishap (or alternate organization as designated by the convening authority) will:

2.7.1. Respond to a mishap involving DoD assets IAW AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations,* and AFMAN 32-4004, *Emergency Response Operations*.

2.7.2. Provide logistical and investigative support as required. Air Reserve Component installations, if nearest the mishap, will respond with available resources to the maximum extent possible, in coordination with the responding active duty installation. NOTE: All mishap response and SIB support MOAs/MOUs between active duty and ARC units will be established by the active duty installation and maintained by the MAJCOM/SE, HQ AFRC/SE, and NGB/SE.

2.7.3. Appoint an Incident Commander when required by AFI 10-2501.

2.7.4. Appoint an Interim Safety Board (ISB) to preserve evidence and gather factual data related to the mishap until the convening authority appoints a safety investigation board or single investigating officer to conduct an investigation. Depending on the mishap, an Interim Safety Board (ISB) may consist of one individual or several depending on the judgment of the installation commander.

2.7.4.1. Do not appoint personnel involved in the mishap to the ISB.

2.7.5. Ensure toxicology testing is immediately accomplished following a mishap, if required or deemed necessary. Evidence gathering and toxicology testing should be balanced with operational requirements. For example, during UAS scenarios where one crew is controlling multiple vehicles, operational need may delay replacement of the crew and toxicology testing until remaining vehicles are safely recovered. A legally defensible chain of custody must be maintained. At a minimum direct observation and documentation of the sample collection (i.e.) name of observer, date/time of collection) should be maintained by the submitting base. Guidelines for the collection and shipment of specimens for toxicological analysis are available at **http://www.afip.org/consultation/AFMES/** Toxicological analyses should be directed toward controlled substances, any medications as indicated by the medical history, and environmental substances (such as carbon monoxide) as indicated by the nature of the mishap or event. Samples should be sent to Armed Forces Institute of Pathology (AFIP), Division of Forensic Toxicology (see **Attachment 2**) to the maximum extent possible. Blood testing is superior and the preferred method for all categories of safety investigations over urine testing since it provides an opportunity to determine the concentration of the substance and thus the expected performance decrement. Also, not all substances are excreted in the urine. Coordinate with the Civilian Personnel Office or Contracting Officer before requiring blood samples from DoD civilian or contractor employees, since they may only be required to complete a urinalysis.

2.7.5.1. Military Members. For all Class A and B aviation mishaps, commanders must test all military crewmembers on the flight orders (includes UAV/UAS crew). For all classes and categories of mishaps, commanders have the discretion to test any involved military members whose actions or inactions, in their judgment, may have been factors in the mishap sequence. Because the evidence is perishable, commanders should test all involved personnel (includes UAV/UAS crew) for aviation mishaps that have the potential of meeting the Class B threshold. When ARC personnel are involved in a mishap, coordinate with the ARC unit commander and/or AFRC/NGB SE offices to resolve any issues that may arise due to duty status issues (i.e., ARC personnel flying in civilian or Inactive Duty for Training status). Blood will be used for toxicological testing of mili-

tary members for aviation safety investigations and is the preferred method for all safety investigations.

2.7.5.2. DoD Civilians. DoD civilians will be subject to testing when their action or inaction may have contributed to the mishap subject to the limitations and guidance in *The Air Force Civilian Drug Testing Plan* (available in the Civilian Personnel Office). Coordinate with the Civilian Personnel Office to assist as needed.

2.7.5.3. Government Contract Employees. Government Contract Employees (includes UAV/UAS crew) will be tested IAW the terms and conditions of the applicable contract or if they consent, when their actions or inaction in the commander's judgment may have been a factor in the mishap sequence. Coordinate with the Contracting Officer to assist as needed.

2.7.6. Make the Appropriate Military Notifications:

2.7.6.1. Inform the public affairs (PA) officer of non-privileged information. Release safety information only as authorized by this instruction.

2.7.6.2. Notify the home installation commander of all casualties, both military and civilian, and ensure the casualties are reported as outlined in AFI 36-3002, *Casualty Services*.

2.7.6.3. Notify the departure and destination bases for aviation mishaps (or the departure base for missile mishaps) and the commander of the unit that had the mishap.

2.7.6.4. Notify the home installation of the persons involved in a United States Army (USA), United States Navy (USN), United States Marine Corps (USMC), or United States Coast Guard (USCG) mishap or, if the home installation is unknown, the nearest installation of the responsible service.

2.7.6.5. Notify AFIP whenever there is a fatality of an Air Force member.

2.7.6.6. Notify the Air Force Communications Agency's Hammer ACE (Adaptive Communications Element) if communications support is deemed necessary. Hammer ACE is funded to provide services to safety investigations at no cost to MAJCOMs or Air Force wings.

2.7.6.7. Notify the Military Surface Deployment and Distribution Command's Defense Transportation Tracking System (**Attachment 2**) when a mishap involves explosives or other dangerous articles being transported or handled by a commercial motor or rail carrier under Department of Transportation (DOT) regulations.

2.7.6.8. Notify local Command Post (Command Post may have reporting requirements IAW AFI 10-206, *Operational Reporting*).

2.7.7. In The United States, make the Appropriate Civilian Notifications:

2.7.7.1. Notify the nearest National Transportation Safety Board (NTSB) regional or field office or the nearest Federal Aviation Administration (FAA) Air Traffic facility if a civil aircraft is involved in a mishap on their installation (see contact information in AFMAN 91-223).

2.7.7.2. Notify the FAA at FAA/AST Combined Operations Center (**Attachment 2**) if licensed commercial space systems are involved in the mishap. During launch of a commercial space vehicle from an Air Force facility, the on-site FAA/AST representative will fulfill this notification requirement and up-channel as required.

2.7.7.3. Notify the nearest Occupational Safety and Health Administration (OSHA) area or regional office within 8 hours of the on-duty mishap when the mishap results in an Air Force civilian employee fatality or involves the inpatient hospitalization of three or more people (one of which must be a DoD civilian employee). If unable to contact the nearest OSHA area or regional office within the required 8-hour time frame, contact the OSHA 24-hour toll-free hot line (**Attachment 2**). Although outside OSHA's investigative jurisdiction, overseas locations are required to notify AFSC/SEG of these types of incidents.

2.7.7.4. Notify federal, state, and local environmental officials, as required, of environmental hazards and spills associated with the mishap.

2.7.7.5. Notify appropriate medical or law enforcement authorities as soon as possible in case of non-Air Force injury or property damage.

2.8. The Interim Safety Board (ISB) President or Interim Safety Officer will:

2.8.1. Preserve evidence.

2.8.2. Identify witnesses and conduct interviews.

2.8.3. Gather factual data.

2.8.4. Receive a briefing on all known hazards (including blood borne pathogens) and personnel protective equipment for the mishap site.

2.8.5. Accept custody of the wreckage and/or evidence, as applicable.

2.8.6. Interim safety board will submit the preliminary 8/24 hour report.

2.9. Commander of the mishap unit (applies when the mishap unit and the mishap location are not co-located) **will**:

2.9.1. Coordinate with the commander of the Air Force installation nearest to the mishap to ensure the appropriate notifications in paragraphs **2.7.6.** and **2.7.7.** are accomplished.

2.9.2. Assist ISB as required/requested. For UAS mishaps, the Commander of the mishap unit will appoint an ISB to complete initial data gathering and preserve evidence for the SIB.

2.9.3. Ensure toxicology testing is performed IAW paragraph **2.7.5.**

2.10. Chiefs of Safety will:

2.10.1. Ensure individuals with access to safety or mishap information, privileged or otherwise, know the limitations placed on their uses and the requirements for protecting such materials. Ensure individuals appointed to investigate mishaps are trained on privilege before receiving any safety or mishap information. Annually train all personnel with access to privileged safety information on the proper handling procedures and document their training.

2.10.2. Maintain a current roster of personnel trained and qualified to perform ISB/SIB duties for weapons, space, aviation, and ground mishaps.

2.10.3. Provide potential primary interim and safety board members and human factors experts training annually on the basics of mishap investigation (AFRC will only train personnel for interim board participation per MOAs/MOUs with the closest active duty AF installation). In addition track and

train annually Psychologists and Aerospace Physiologists/Human Performance Training Teams (HPTT) who have been through the Aircraft Mishap Investigation and Prevention (AMIP) Course, Aircraft Mishap Investigation Course (AMIC), or the Flight Safety Officer (FSO) Course (AFRC does not have any assigned psychologists/physiologists and is exempt from this requirement). The Chief of Aerospace Medicine (SGP) will provide a list to the installation COS and MAJCOM SGP of all Flight Surgeons and the dates of AMIP training as well as Aerospace Physiologists/Human Performance Training Team personnel and Psychologists who have completed AMIP, AMIC, MINA or FSO courses.

2.11. Deployed Unit Safety Officers (safety personnel deployed with DoD assets or an established safety office overseas in an AOR) will:

2.11.1. Notify the COMAFFOR safety office, who will, in turn, notify and coordinate with the MAJCOM that owns the asset (property) or personnel involved in the mishap.

2.11.2. Ensure compliance with the requirements set forth in this instruction (paragraph **2.7.**) as the "nearest Air Force installation" with regards to responding to a mishap. NOTE: Ultimate investigating and reporting responsibilities remain with the owning convening authority.

2.11.3. Coordinate with the appointed safety investigator to compile the mishap data that can be collected locally and forward it to the owning unit for mishap report completion, as required.

2.12. Responsible Contracting Office will ensure contracts and lease agreements require contractors and subcontractors (e.g., contract aircraft maintenance) to promptly report pertinent facts regarding mishaps involving reportable damage or injury to the Air Force and to cooperate IAW this instruction, in any Air Force safety investigation. Cooperation will include toxicology testing (paragraph **2.7.5.**). For additional guidance on contracts see AFI 91-202, *Air Force Mishap Prevention Program*.

2.13. Safety Investigation Board (SIB)/Single Investigating Officer (SIO) will work solely for the convening authority while accomplishing the requirements outlined in **Chapter 5** and **Chapter 6** of this instruction.

2.14. System Program Offices. For Class A and B mishaps involving the system(s) they are responsible for, System Program Offices will analyze the hazards that contributed to the mishap and recommend materiel risk mitigation measures, especially those that can minimize potential human errors.

Chapter 3

PRIVILEGED SAFETY INFORMATION

3.1. General Information. Violations of the prohibitions in paragraph 3.3.1. of this instruction are punishable under Article 92, UCMJ and may be grounds for disciplinary actions according to civilian personnel regulations, or may lead to contract actions. All safety reports contain privileged safety information, but not all information in a safety report is privileged. EXCEPTION: preliminary messages, HATRs, Wildlife Strike Class E Reports, and non-DoD aviation safety reports do not contain privileged safety information. Also ground and industrial, and explosive and chemical agents safety reports regarding mishaps that occurred before 3 Oct 00 do not contain privileged safety information (paragraph **3.8.**).

3.2. Identifying Privileged Safety Information. Privileged safety information refers to information that is exempt by statute or case law from disclosure outside the Air Force safety community. The military safety privilege is judicially recognized and protects the investigative process. The Air Force treats this information confidentially to ensure commanders quickly obtain accurate mishap information thereby promoting safety, combat readiness, and mission accomplishment. NOTE: Safety investigations of non-DoD aviation mishaps are conducted using this instruction as guidance and do not contain privileged safety information.

3.2.1. Privileged information includes:

3.2.1.1. Findings, conclusions, causes, recommendations, analysis, and the deliberative process of safety investigators. Diagrams and exhibits if they contain information which depicts the analysis of safety investigators. This includes draft versions of the above material.

3.2.1.2. Information given to safety investigators pursuant to a promise of confidentiality (paragraph **3.4.**).

3.2.1.3. Computer generated animations, simulations, or simulator reenactments in which safety investigator analysis is incorporated. Animations made exclusively from recorder data (including Military Flight Operations Quality Assurance data) are not privileged.

3.2.1.4. Photographs, imagery, and animations that reveal the deliberative process of the board, including photographs with markings.

3.2.1.5. Life Sciences Material that contain analysis by a safety or life sciences investigator. NOTE: 72-hour histories, 14 day histories and interview narratives by Medical Officer are only privileged if privilege was granted.

3.3. Prohibited Uses of Privileged Safety Reports and Information. These prohibitions apply to Part 2 of formal safety reports, status and final safety messages, and any other reports or documents containing privileged safety information.

3.3.1. Air Force civilian employees, military members, and government contractors will not wrongfully use, permit the use of, gain access to, or allow access to the privileged information in any safety report, or portions thereof, for other than officially authorized mishap prevention purposes.

3.3.2. The Air Force does not use privileged safety information as evidence for punitive, disciplinary, or adverse administrative actions, for determining the misconduct or line-of-duty status of any person,

in flying evaluation board hearings or reviews, to determine liability or liability in claims for or against the United States, or in any other manner in any action by or against the United States.

3.3.2.1. Adverse administrative actions include, but are not limited to, letters of reprimand, counseling, or admonishment, referral EPRs/OPRs, promotion propriety actions (not qualified for promotion, delay and/or denial), administrative separations, selective reenlistment denials, or evidence before any evaluation board and other similar actions. Commanders and supervisors will use other sources of information which are not privileged to take punitive or adverse administrative actions.

3.3.2.2. While privileged safety information may not be used as evidence for punitive, disciplinary, or adverse administrative actions, information from other sources may be used. Sources include information from Accident Investigation Board reports under AFI 51-503, *Ground Accident Investigations* under AFI 51-507, *Commander Directed Investigations (CDIs)*, safety mishap participant interviews when promises of confidentiality are not authorized (Article 31, UCMJ, rights advisement may be necessary), Security Forces and/or AFOSI information gathered for criminal matters. Consult your local JA for further guidance.

3.3.3. Controlling and Handling Privileged Safety Reports and Information. Personnel having access (authorized access or unauthorized access) to privileged safety reports and information have a duty to control the reports to prevent their use for anything other than mishap prevention. When these reports and information are no longer needed for mishap prevention purposes, dispose of IAW the Air Force *Records Disposition Schedule (RDS) located at* **https://afrims.amc.af.mil**

3.3.3.1. All persons (except the convening authority, his or her staff, safety office staff, and AFSC personnel) given or provided access to privileged safety information by the ISB or SIB prior to the convening authority briefing must have a **Safety Investigation Non-Disclosure Agreement** (**Figure A3.2.**), **Witness Promise of Confidentiality and Non-Disclosure Agreement** (**Figure A3.3.**) or **Promise of Confidentiality and Non-Disclosure Agreement for Contractor Representatives Serving as Technical Experts to Safety Investigations** (**Figure A3.5.**) on file with the ISB or SIB.

3.4. Promise of Confidentiality.

3.4.1. Purpose. The Air Force gives a promise of confidentiality to encourage frank and open communications with individuals who provide witness statements to a safety investigator and with government contractors who built, designed, or maintained the equipment and participate in the safety investigation. However, if an individual provides a false statement to a safety investigator under a promise of confidentiality, that statement (and any other information that witness gave to the safety investigator) loses its privileged status and can be used to support disciplinary and/or adverse administrative actions.

3.4.2. Promises of Confidentiality Authorized. Promises of confidentiality are only authorized in investigations of Air Force nuclear, space, aviation, guided missile, directed energy, and friendly fire mishaps. However, there may be occasions, such as mishaps involving complex systems, military-unique items (such as armored vehicles), or military-unique operations or exercises, where a witness or involved contractor will not provide a statement or information without a promise of confidentiality. When this appears to be the case, contact AFSC/SEG or AFSC/JA who will forward your request to AF/SE or AFSC/CD for approval to grant confidentiality to those witnesses.

3.4.3. Promises of Confidentiality Not Authorized. Promises of confidentiality are not authorized for explosives and chemical agents, afloat, motor vehicle, off-duty military, and ground and industrial mishaps (see the exception for complex systems, military-unique items, or military-unique operations or exercises in paragraph **3.4.2.**). Promises of confidentiality are also not authorized for HATRs.

3.4.4. Persons Authorized to Make Promises of Confidentiality. Only the ISB President, SIB President or Investigating Officer (IO) or a SIO may offer promises of confidentiality and only during safety investigations where promises of confidentiality are authorized. When conducting safety investigations in which promises of confidentiality are authorized, the SIB President and IO have the discretion to decide who will be offered a promise of confidentiality. The SIB President and IO's decision should be based upon a witness or contractor's reluctance to cooperate or apparent self-interest in not disclosing information. Promises of confidentiality will only be given as needed to ensure forthright cooperation of the witness and may not be given on a blanket basis to all witnesses. Limiting the persons authorized to make the promises of confidentiality does not mean that the SIB President or the IO must be present at all witness interviews.

3.4.5. Persons to Whom Promises of Confidentiality May be Offered. Promises of confidentiality may be offered to any witness and contractors who built, designed or maintained the equipment in order to encourage their full cooperation and candid statements.

3.4.6. Non-privileged Witness Statements. If witnesses provide statements without a promise of confidentiality, ensure they are informed that their statement will be provided to the accident investigation board (if applicable) and/or may be released to the public pursuant to a Freedom of Information Act (FOIA) request. Non-privileged witness statements are placed in Part 1 of the safety report. Consult the Host Installation SJA or a labor relations officer for guidance before interviewing any federal civilian employees covered by a bargaining unit.

3.5. Marking and Documenting Safety Information.

3.5.1. The cover and individual pages of documents containing privileged information will be clearly marked with the privileged warning statement in **Figure A3.1.** All media containing privileged information (audiotapes, videotapes, animations, simulations, computer generated profiles, etc.) will be clearly marked with the warning statement in **Figure A3.1.** See paragraph **3.6.2.** for further information on email. Part 1 (Factual Information and Releasable Material) of a formal report will not be marked with the privileged warning statement in **Figure A3.1.**

3.5.2. Safety reports are for official use only (FOUO), DoD 5200.1-R, *Information Security Program*, if they are not classified. However, not each document in the report is FOUO. The factual documents in Part 1 of formal safety reports are not typically considered FOUO by this AFI, and should not be marked as such. However, documents from other sources included in Part 1 may already be marked FOUO. For instance, Part 1 documents may warrant protection based on Privacy Act or the Export Control Act. Only the OPR for the document may authorize removal of FOUO markings.

3.5.3. Promises of Confidentiality (Witness and Contractor Personnel). If a promise of confidentiality is offered and accepted, it must be documented. Use the **Witness Promise of Confidentiality and Non-Disclosure Agreement** in **Figure A3.3.** or **Promise of Confidentiality and Non-Disclosure Agreement for Contractor Representatives Serving as Technical Experts to Safety Investigations (Figure A3.5.)** where applicable. Read, record, and transcribe the statement in **Figure A3.6.** for

recorded interviews of witnesses. Use **Figure A3.8.** as a cover sheet for confidential technical reports and analysis provided by contractors.

3.5.4. Non-privileged Witness Statements. If witnesses provide statements (written or verbal) without a promise of confidentiality, it must be documented by using the **Non-Privileged Witness Statement(s)** in **Figure A3.4.** Read, record and transcribe the statement in **Figure A3.7.**

3.6. Transmitting Safety Information.

3.6.1. To protect the privileged status and to ensure the correct handling of safety reports, originating organizations will use the AFSAS reporting system to transmit messages. AFSAS is a CAC required system ensuring the protection of privileged information. If AFSAS is not available (paragraph **6.1.**), use e-mail and the addressing requirements of this instruction. All e-mail safety messages containing privileged safety information or Privacy Act information must be password-protected. Send the applicable password in a separate message or by another mode of transmission.

3.6.2. If AFSAS and e-mail are not available, use one of the following ways to send privileged safety reports and information:

3.6.2.1. Use AMHS and the addressing requirements of this instruction.

3.6.2.2. Fax the document ensuring that the recipient will receive the faxed document immediately upon receipt.

3.6.3. **Classified Mishap Reporting, Weapons Safety Investigations and Reports.** In order to collect classified mishap reports for the Weapons Safety Community (e.g. Dull Swords, Broken Arrow, etc.) all classified mishaps must be submitted via SIPRNET to AFSC/SEW for mishap reporting, tracking and prevention.

3.7. Authorized Use and Release of Privileged Safety Reports and Information. In order to help ensure courts honor the assertion of privilege, the rules described in this paragraph must be followed. The Air Force ensures privileged safety reports and information are used only by persons and agencies whose duties include relevant mishap prevention responsibilities (paragraphs **3.7.2.** and **3.7.3.**). All personnel and agencies authorized access to privileged safety reports and information will follow the policy in paragraphs **3.3.** and **3.3.3.** Unique circumstances described in paragraphs below allow certain authorized individuals to release privileged information outside the Air Force. Privileged safety information remains Air Force property. Questions regarding access to privileged safety information should be referred to AFSC/JA. Access is limited to information that is necessary for and consistent with mishap prevention. Whenever privileged safety information is requested, first determine whether or not mishap prevention goals can be met by sanitizing the information (paragraph **3.7.1.**). If the answer is no, then provide only the necessary information to the authorized persons or agencies with the restrictive markings affixed.

3.7.1. Sanitizing Privileged Safety Reports. Sanitizing reports or extracts from reports means obscuring the relationship between the identity of a mishap and the findings, conclusions, causes, recommendations, deliberative processes resulting from the investigation, and statements made under a promise of confidentiality. Wing safety officers or their designated representatives (that are properly trained) may sanitize privileged safety reports and other media for unit use and for use by authorized contractor personnel. Some mishaps, because of widespread publicity or unique circumstances, cannot be fully sanitized. After a report has been sanitized, the remaining portions of the findings, causes, recommendation, conclusions, or opinions of the investigation are no longer privileged. (Note:

Sanitized reports are not necessarily releasable to the public since they may still contain contractor proprietary information or information protected by the Privacy Act, Arms Export Control Act, or Export Administration Act. Ensure sanitized reports are appropriately labeled.) Sanitizing a report involves separating the following identifying information from related safety investigator findings, causes, recommendations, conclusions, or opinions:

3.7.1.1. Date and place of the mishap.

3.7.1.2. Aircraft, UAV/UAS, missile, vehicle, or weapon serial number.

3.7.1.3. Names and social security numbers (SSN), if included, of persons involved.

3.7.1.4. Any other detail identifying the mishap.

3.7.1.5. Remove identifying information and markings identifying the documents as privileged or FOUO before reproducing sanitized reports or extracts of reports.

3.7.1.6. Do not release statements or contractor reports obtained with a promise of confidentiality.

3.7.2. Limiting Release within the Air Force. Safety officers and their staffs, duly appointed safety investigators, AFSC personnel and AF/SE and his or her staff, are authorized access to and use of privileged safety information based on their safety duties. Other Air Force officials, when their duties include mishap prevention and when it is necessary to develop, take, or review preventive actions, may obtain access to privileged safety information. See paragraphs **3.3.**, **3.3.3.**, and **3.7.** MAJCOM, NAF/Center or unit Chiefs of Safety are authorized, when sanitized information is inadequate, to provide privileged safety information as lessons learned to Air Force members on a need-to-know basis and solely for mishap prevention. They will ensure members are instructed on properly protecting information and their responsibilities to prevent further, unauthorized release, and that they sign non-disclosure agreements. Lessons learned will not include confidential statements or contractor reports.

3.7.2.1. AF/SE; AFSC/CD and division chiefs; MAJCOM, NAF/Center or unit Chiefs of Safety; SIB Presidents or SIOs; are authorized to disclose privileged safety information to AF officials as described in paragraph **3.7.2.**

3.7.2.2. Accident Investigation Board (AIB) investigators with a safety need to know (e.g., pilots, commanders, operations personnel) may have access to privileged safety information from the corresponding safety investigation only after final approval of the AIB report. AIB investigators must first coordinate with the convening authority JA and SE if the AIB report has not been released to the public. The convening authority will determine if access is appropriate before next-of-kin are briefed following a fatal mishap.

3.7.2.3. Part 1 of the two-part formal safety report and certain factual information is given to the AIB president (paragraph **5.14.** and the discipline specific safety manual AFMAN 91-22X).

3.7.2.4. ANG and AF Reserve Personnel. Apply the test for releasing privileged safety information that is described in paragraph **3.7.** Do not withhold privileged safety reports from ANG and AF Reserve personnel who have a need to know when sanitized information is not adequate to develop, take, or review corrective action. Persons having a need to know include, but are not limited to, those involved in mishap prevention; whose duties include the preparation, dispatch, or internal distribution of safety reports; and those who act in response to mishap prevention recom-

mendations. Releasing information under this paragraph does not constitute release outside the Air Force.

3.7.2.5. Other Air Force officials such as a Staff Judge Advocate (other than AFSC/JA), criminal investigative agencies such as the Air Force Office of Special Investigations (OSI), Security Forces, Historian and Public Affairs do not normally receive privileged safety information because of possible conflicts of interest and because use of such information by such officials would not be for mishap prevention purposes.

3.7.3. Limiting Release Outside the Air Force. In certain cases, the Air Force has agreed to exchange privileged safety information with other DoD agencies solely for mishap prevention purposes. Also, the Air Force shares certain mishap prevention information with other entities in the interests of the general safety community. See paragraphs **3.3.**, **3.3.3.**, and **3.7.**

3.7.3.1. Responding to Subpoenas and Legal Process. Upon receipt of a legal process requiring participation in a court proceeding, including depositions and requests for production of documents, contact AFSC/JA and the nearest Air Force base legal office. Fax a copy of the legal process to AFLOA/JACC (DSN 426-9009; commercial (703) 696-9009). Encourage requesters to ask the MAJCOM/JA for the AFI 51-503 accident investigation report if one has been prepared.

3.7.3.2. Responding to Freedom of Information Act (FOIA) requests under Title 5, United States Code, section 552. Send FOIA requests for all safety reports to AFSC/JA (**Attachment 2**).

3.7.3.3. Historical Safety Reports. AF/SE or AFSC/CD may release the findings of a Safety Board, contained in historical safety reports prepared IAW DODI 6055.07 (or its predecessors), provided no national defense or safety interest exists. For the purpose of this provision, historical reports shall be defined as those concerning mishaps more than 25 years old. (Note: Safety Reports on pre-1956 mishaps are not protected by the safety privilege and are stored at the Air Force Historical Research Agency, Maxwell AFB.)

3.7.3.4. For Investigations Where Safety Investigators are Not Authorized to Grant Promises of Confidentiality (see paragraph **3.4.3.**). AF/SE or AFSC/CD is designated by the Secretary of the Air Force to assert the privilege to oppose any court-ordered release of privileged safety information for all investigations where promises of confidentiality are not authorized. Further, upon determination by AF/SE or AFSC/CD that no safety or national defense interest is jeopardized, AF/SE or AFSC/CD may authorize the release of safety investigation findings.

3.7.3.5. Limiting Release to Contractors. Contractors may need access to privileged safety information when they are performing an Air Force function involving mishap prevention. Contractors may also need access to privileged safety information if they designed, built, maintained or operated Air Force weapon systems, their components, or other Air Force equipment, in order to correct defects or other problems and help prevent future mishaps. When contractors need access to privileged safety information either the **Safety Investigation Non-Disclosure Agreement (Figure A3.2.)** or **Promise of Confidentiality and Non-Disclosure Agreement for Contractor Representatives Serving as Technical Experts to Safety Investigations (Figure A3.5.)** must be signed and stored at the safety office. Access will be limited to what is needed to prevent future mishaps. Contractors will not release the information to personnel who do not have safety responsibilities; for example, privileged safety information will not be released to the general counsel's office or public relations personnel. The number of contractor employees who have access to the information shall be strictly limited to only those individuals who have a need to know the infor-

mation in order to enhance the safety of the Air Force weapon systems. After a project is complete, contractors will not maintain the information in their files and will ensure all items are destroyed. Contractors must understand and agree to their responsibilities to treat such information as confidential. See paragraphs **3.3.**, **3.3.3.**, and **3.7.**

3.7.3.5.1. Contractors who built, designed, or maintained equipment involved in mishaps send representatives to support Air Force SIBs at the request of the Air Force. SIB presidents and safety investigators will ensure those representatives understand that the Air Force may, at the contractor's request, extend a claim of privilege over documents provided by the contractor representatives to the SIB when the Air Force maintains sole possession or control. A claim of privilege may not be sustained over notes, documents, and other matter produced during the SIB investigation by the contractor but retained by the contractor representatives. SIB president grants these contractors access to privileged safety information only if it is essential to assist the SIB.

3.7.3.5.2. Contractors providing weapon system maintenance support are performing an Air Force function. The wing chief of safety, NAF/SE, MAJCOM/SE, or AFSC may provide the contractors safety information for AF safety purposes.

3.7.3.5.3. Air Force operations conducted at contractors' facilities require privileged safety information handling.

3.7.3.5.4. Contractors providing weapon system crew training are performing an Air Force function, and need privilege safety information from safety reports, videos, and other similar media to build training scenarios. The wing chief of safety, NAF/SE, MAJCOM/SE, or AFSC may provide the contractors privilege safety reports for this function.

3.7.3.5.5. Contractors who instruct safety programs in mishap investigation or safety program management contracted by the Air Force or ARC require access to privileged safety information. The wing chief of safety, NAF/SE, MAJCOM/SE, or AFSC may provide the contractors safety reports for this function.

3.7.3.5.6. Contractors who build, design, maintain, or operate Air Force weapon systems, their components, or other Air Force equipment may need privileged safety information to correct defects or other problems and prevent future mishaps. The wing chief of safety, NAF/SE, MAJCOM/SE, System Program Office safety officer or equivalent, or AF/SE or AFSC/CD may provide contractors privileged safety information for this function. This includes Space System Contractors, Space Technical Support Contractors, Advisory & Assistance Services (A&AS), and Federally Funded Research & Development Centers when they are performing an Air Force function.

3.7.3.5.7. Contractors performing AF safety mission may require privileged safety information. Wing Chief of Safety, NAF/SE, MAJCOM/SE, or AFSC authorize access to privileged safety information for this function.

3.7.3.5.8. Any other release of privileged safety information to contractors will first be approved by AF/SE or AFSC/CD.

3.7.3.6. Limiting Release to Other Services and DoD Agencies. Other US military services and DoD agencies responsible for flying, supporting or maintaining Air Force aircraft may receive privileged safety information when needed for mishap prevention. Approval authority for

exchanging formal safety reports with other military services is AF/SE, AFSC/CD or AFSC/JA. Joint project or program offices may share privileged safety information with members of other DoD agencies working on the same project or program without prior approval

3.7.3.7. Limiting Release to Foreign Military Organizations. All agreements regarding the release of safety information to foreign military organizations are subject to the limitations and guidance found in DODI 6055.07. Release of safety information to NATO military organizations is governed by NATO STANAGs 3101, *Exchange of Safety Information Concerning Aircraft and Missiles*, and 3531, *Safety Investigation and Reporting of Accidents/Incidents Involving Military Aircraft and/or UAVs (with US reservations)*.

3.7.3.7.1. Foreign Nationals Flying USAF Aircraft or Participating in USAF Training. Release of safety information to foreign nationals is governed by DODI 6055.07. Note that foreign national military personnel assigned to the DoD Components are defined as DoD military personnel by DODI 6055.07

3.7.3.7.2. Comparable persons and offices within EPAF countries may have access to privileged information pertaining to F-16 mishaps only. These countries are participants in the multinational fighter program of co-production of the F-16 with the United States, which predated DoDI 6055.7. The release authority (AF/SE) delegates to F-16 SIBs the authority to release applicable sections of F-16 final mishap message reports solely to the EPAF via password protected data transfer. This information is for mishap prevention purposes only.

3.7.3.8. Limiting Release of Nuclear Safety Reports to Agencies outside the Air Force. AF/SE may approve the release of extracts of nuclear safety reports to US governmental agencies with statutory jurisdiction, such as the Defense Threat Reduction Agency (DTRA); and operations offices or authorized contractors of the Department of Energy. The MAJCOM commander may provide DULL SWORD reports about weapons and common equipment deficiencies to the unified commander as deemed appropriate and necessary for the theater commander to accomplish his or her role in nuclear surety. Send this information by inclusion of the appropriate unified command address in the message report as provided by the MAJCOM supplement to this instruction. The unified commander ensures the information is treated as privileged information and not released or distributed outside the respective headquarters without first obtaining permission from AF/SE. The Air Force releases this information only to reach its nuclear surety goals.

3.7.3.9. Limiting Release to NTSB and FAA. AFI 91-206, *Participation in a Military or Civil Aircraft Accident Safety Investigation* governs the release of safety information to the NTSB and FAA for aviation mishaps. For other mishaps, use AFI 91-206 as a guide.

3.7.3.10. Limiting Release to NASA and National Reconnaissance Office (NRO). Applicable space safety reports will be distributed to NASA and NRO upon completion.

3.8. Handling and Disclosing Reports on Ground and Industrial, and Explosives and Chemical Agents Mishaps that occurred before 3 Oct 00.

3.8.1. The purpose of these reports is mishap prevention. The reports were normally considered general-use reports in that witnesses were not promised confidentiality, and the reports were not considered privileged. However, they are FOUO and are handled according to DoD Regulation 5400.7-R/AF Supplement, *DoD Freedom Of Information Act Program*.

3.8.2. Do not disclose the identities of involved personnel in educational or promotional materials.

3.8.3. These reports can be released outside the Air Force safety community and outside the Air Force once protected information, including Privacy Act information, findings, and recommendations are removed. The installation chief of safety is the release authority for providing these reports to other Air Force personnel. The reports may not be used for any purpose other than mishap prevention, with the exception that the complete report may be released to Air Force claims personnel to assist them in evaluating claims for damages filed against the Air Force. When release will be made outside the Air Force, AFSC/JA is the release authority.

3.8.4. To control reports retain only one copy of each safety report at wing or base, intermediate command, and MAJCOM safety offices. Air Force and unified command agencies may view these reports for official purposes, but they do not release copies without approval of the appropriate disclosure authority. Advise personnel viewing these reports that findings of cause, conclusions, recommendations, corrective actions, and witness statements taken by safety investigators in the course of the investigation are used primarily for mishap prevention purposes. Refer all requests for release to AFSC/JA.

3.8.5. Upon written request, AFSC/JA provides the releasable portions of ground and explosive safety reports to the requester.

3.9. Technical Orders (TOs) and Time Compliance Technical Orders (TCTOs). TOs and TCTOs, including maintenance manuals and flights manuals, are usually limited release documents. They are often protected by Section 38 of the Arms Export Control Act (AECA) (22 U.S.C. 2778); the Export Administration Act of 1979 (50 U.S.C app. 2401-2420); or the International Emergency Economic Powers Act (50 U.S.C. 1701-1706). Written approval (E-mail is acceptable) must be obtained from the technical content manager prior to including extracts of these documents in SIB reports. Include a copy of the approval in the formal report.

3.10. Actual or Potential Compromise of Privileged Safety Information

3.10.1. **Policy.**

3.10.1.1. It is Air Force policy that unauthorized releases of privileged information will be thoroughly investigated to minimize any possible damage to national security and to continue to ensure safety privilege is protected. The investigation will identify appropriate corrective actions that will be immediately implemented to prevent future unauthorized releases.

3.10.1.2. Suspected instances of unauthorized public disclosure of privileged safety information shall be reported promptly and investigated to determine the nature and circumstances of the unauthorized disclosure, the extent of the disclosure, and any ramifications on protecting it from further release, and the corrective and disciplinary action to be taken.

3.10.1.3. A compromise of privileged safety information occurs when unauthorized individuals are knowingly, willfully, or negligently given access to privileged safety information. Unauthorized individuals include those individuals who do not have a safety need-to-know. Refer to paragraph **3.7.**

3.10.2. **Reporting and Notifications**

3.10.2.1. Personnel who learn of an unauthorized release of privileged safety information should immediately report it to their MAJCOM Safety office, who will in-turn report the incident to the Air Force Safety Center.

3.10.3. **Formal Investigation**

3.10.3.1. The convening authority of the safety investigation board responsible for the unauthorized release (or his or her subordinate commander), or the staff agency chief of the activity responsible for the incident, will appoint an investigating officer to conduct a formal investigation to determine if privileged safety information was improperly released, the extent of the unauthorized release, and the circumstances surrounding the release.

3.10.3.2. A formal investigation is a detailed examination of evidence to determine the extent and seriousness of the unauthorized release of privileged safety information. The formal investigation will identify responsibility for any disregard (deliberate or inadvertent) of governing directives which led to the unauthorized release. The investigating official must be senior to all individuals suspected of an unauthorized release.

3.10.3.3. The guidelines for selection of the investigating officer are:

3.10.3.3.1. The investigative official is the personal representative of the Convening Authority and/or the Commander. The investigative official must be impartial, unbiased, objective, thorough, and available. The investigative official must also understand protecting privileged safety information and should receive a briefing from AFSC/JA on protecting privileged information.

3.10.3.3.2. The investigative official must be a commissioned officer, senior NCO (E-7 and above), or a civil service employee equivalent (GS-9 or NSPS equivalent and above).

3.10.3.3.3. The investigation will be the investigative official's only duty (unless the Convening Authority determines otherwise) until the report is completed and approved by the Convening Authority.

3.10.3.3.4. Appointing Authorities will not appoint an investigative official who is retiring, separating, being deployed, or being reassigned within 180 days.

3.10.3.4. The investigating officer should specifically address:

3.10.3.4.1. When, where, and how the incident occurred.

3.10.3.4.2. Was privileged safety information released improperly?

3.10.3.4.3. If unauthorized release occurred, what specific information and/or material was involved?

3.10.3.4.4. In what specific media article or program did the privileged information appear?

3.10.3.4.5. To what extent was the privileged safety information disseminated?

3.10.3.4.6. Was the information properly marked and password protected before being disseminated?

3.10.3.4.7. Was the information officially released?

3.10.3.4.8. Are there any leads to be investigated that might lead to the identification of the person responsible for the release?

3.10.3.5. Investigating officers must complete the investigation within 30 duty days from appointment, unless the Convening Authority grants an extension.

3.10.4. **Management and Oversight.**

3.10.4.1. The investigating officer will route the completed report through Safety channels before forwarding it to the Convening Authority.

3.10.4.2. The Convening Authority will:

3.10.4.2.1. Close the investigation unless MAJCOM/FOA/DRU directives indicate otherwise.

3.10.4.2.2. If an unauthorized release has been found, the Convening Authority or commander will take appropriate administrative or disciplinary action pursuant to the UCMJ, civilian personnel rules, or governing contract provisions.

3.10.4.2.3. Debrief anyone who has had unauthorized access.

3.10.4.2.4. Forward a copy of the completed report to the Convening Authority/SE with courtesy copy to AFSC/JA identifying corrective actions taken.

3.10.4.2.5. Dispose of the report according to the instructions in *WebRims Records Disposition Schedule.*

Chapter 4

DETERMINING INVESTIGATIVE RESPONSIBILITY

4.1. General Information. The Air Force generally assigns mishap investigative responsibilities to the command (MAJCOM) that experienced the loss of an assigned/owned asset (personnel or property). The command (MAJCOM) with investigative responsibility may or may not have Operation Control (OPCON) over the asset (property). In some cases, mishaps may involve assets or individuals from multiple agencies. Follow the guidance in this chapter to determine investigative responsibility.

4.2. Convening Authority Determination. The convening authority is the individual who has the authority to order a safety investigation. The MAJCOM/CC of the organization that owns the asset is considered to be the convening authority unless: AF/SE assumes investigative responsibility, another MAJCOM/CC assumes investigative responsibility (with the concurrence of the owning organization and AF/SE), or investigative responsibility is delegated to a lower level of command.

4.2.1. For all on-duty Class A, all nuclear Class A, and all NUCFLASH, BROKEN ARROW or BENT SPEAR mishaps, the MAJCOM/CC is the convening authority. This authority will not be delegated to a subordinate commander. EXCEPTION: ARC Class A mishaps that are not aviation mishaps (paragraph **4.5.**)

4.2.2. For all other mishaps and events, convening authority may be delegated to an appropriate level of command.

4.2.3. The Owning Unit is that unit which has permanent possession and mishap-reporting accountability for the assets and personnel involved in the mishap. For mishaps involving multiple "owning" units within the same command, the units involved will mutually agree who will assume convening authority and mishap reporting responsibilities. In cases where agreement cannot be reached, the MAJCOM/CC will determine the accountable organization.

4.2.4. For UAS mishaps where damage is confined to the UAV, the owning MAJCOM is the organization that owns the UAV, regardless of the controlling organization.

4.3. Mishaps Involving Multiple Commands. Involved MAJCOM/CCs will determine which command will assume investigative responsibility and advise AF/SE within 24 hours. In general, the command whose asset initiated the mishap will assume investigative responsibility. If mishap initiation is initially unclear, the command sustaining the highest level of loss in the mishap will assume investigative responsibility. MAJCOM/CC may determine other compelling reasons exist for assigning investigative responsibility differently. If MAJCOMs cannot reach agreement, AF/SE will determine mishap investigation responsibility.

4.4. Mishaps Involving Multiple Services. For a multi-service or joint operational mishap, follow most current Memorandum of Understanding among the US Army, Air Force and Naval Safety Centers, Headquarters Marine Corps (Safety Division) and the US Coast Guard Health and Safety Directorate for Safety Investigation and Reporting of Joint Service Mishaps (see **Attachment 6**). MAJCOM/SE should contact AFSC/SEF to determine investigative responsibility.

4.5. Mishaps Involving Air Reserve Component Assets. The convening authority for all ARC Class A aviation mishaps is the gaining MAJCOM/CC. For all other mishaps and events, convening authority is determined by the AFRC/CC or NGB/CF as applicable.

4.6. Mishaps Involving NATO Systems or Personnel. Investigate and report mishaps involving Air Force aircraft, space vehicles, or missiles according to this instruction. Comply with NATO STANAG 3102, *Flight Safety Co-operation in Common Ground/Air Space*, 3318, *Aeromedical Aspects of Aircraft Accident/Incident Investigation*, 3531, *Safety Investigation and Reporting of Accidents/Incidents Involving Military Aircraft and/or UAVs* (with US reservations), and AIR STD 85/02A, *Investigation of Aircraft/Missile Accidents/Incidents* (with US reservations). The investigation required under STANAG 3531 is in addition to, and conducted separately from, the investigation required by this instruction.

4.7. Mishaps Involving Non-NATO Foreign Military Equipment or Personnel in CONUS. It is desirable to conduct only one safety investigation that has the full support and participation of all involved nations. However, separate investigations are authorized if necessary due to law, agreement, or procedure.

4.7.1. When a mishap/event involves only foreign military assets and/or personnel, the foreign nation military authorities are responsible for the investigation. The USAF generally reserves the right to participate as an observer on the foreign safety investigation or, if no investigation is conducted, the right to conduct its own safety investigation.

4.7.2. When a mishap/event involves a foreign military aircraft and a US civilian aircraft in the CONUS, the National Transportation Safety Board (NTSB) has priority over the investigation. See paragraph **4.8.**

4.7.3. When a mishap/event involves both USAF and foreign assets and/or personnel (military or civilian), the Air Force will conduct a safety investigation. Depending on the circumstances the NTSB may take priority over the investigation.

4.8. Mishaps Involving Civil Aviation or Commercial Spacelift and/or Federal Air Traffic Services.

4.8.1. The NTSB investigates mishaps involving both Air Force and civil aircraft that occur within US jurisdiction. The Air Force may send an observer to the NTSB investigation and/or may conduct a separate investigation. However, the NTSB has priority over all evidence.

4.8.2. Air Force mishaps that occur within US jurisdiction involving commercial spacelift may be investigated by the NTSB, the FAA/AST, and the commercial vendor depending on the extent of the mishap. The Air Force may send an observer to any of these investigations and/or may conduct a separate investigation. If the NTSB leads the investigation, the NTSB has priority over all evidence. See AFMAN 91-222 for more information.

4.8.3. See AFI 91-206 for guidance on NTSB, FAA, and Air Force cooperation in these investigations.

4.9. Mishaps Involving Contractors.

4.9.1. Government contractor involvement.

4.9.1.1. If the Air Force administers the contract and the mishap involves reportable damage or injury to the Air Force (paragraph **1.3.1.1.**), the MAJCOM/CC administering the contract is the convening authority. Convening authority may be delegated IAW paragraph **4.2.** The convening

authority will ensure the mishap is investigated and reported IAW this instruction and the terms of the contract.

4.9.1.2. If the Air Force administers the contract and the mishap involves reportable damage or injury to another DoD agency (paragraph **1.3.1.1.**), the MAJCOM/CC administering the contract will ensure all mishap information is sent to the involved agency with an information copy to AFSC.

4.9.1.3. If another DoD agency administers the contract and the mishap involves reportable damage or injury to the Air Force (paragraph **1.3.1.1.**), the MAJCOM who suffered the loss will ensure the mishap is investigated and reported according to this instruction.

4.9.2. Mishaps Involving Non-Accepted Air Force Aerospace Vehicles. The MAJCOM/CC who negotiates the contract for the aerospace vehicle is the convening authority. Convening authority may be delegated IAW paragraph **4.2.** The convening authority is responsible for the safety investigation and reporting, although the aerospace vehicle may not be under the operational control of the Air Force. The aerospace vehicle loss is recorded as a mishap to the Air Force at large (paragraph **1.7.**).

4.9.3. Mishaps involving Aerospace Vehicles Leased to a Non-DoD Organization for Modification, Maintenance, Repair, Test, Contract Training, or Experimental Project for a DoD Component, when the Government has assumed Ground and Flight Risk. The MAJCOM/CC who negotiates the contract for the aerospace vehicle is the convening authority. Convening authority may be delegated IAW paragraph **4.2.** The convening authority is responsible for the safety investigation and reporting, although the aerospace vehicle may not be under the operational control of the Air Force. The aerospace vehicle loss is recorded as a mishap to the Air Force at large (paragraph **1.6.**).

4.9.3.1. AFMC centers normally negotiate all aircraft and engine leases. If another agency negotiates a lease, the agency and HQ AFMC shall determine who the convening authority will be prior to executing the lease.

4.9.4. Other Aerospace Vehicle Contractor Mishaps. If a mishap involves government-furnished or leased aerospace vehicles, or new production aerospace vehicles (accepted by the Air Force on a DD Form 250, *Material Inspection and Receiving Report*, but not yet delivered), the MAJCOM/CC of the command negotiating the contract/lease is the convening authority unless otherwise specified in the contract/lease agreement. In cases where contract/lease agreements specify investigative jurisdiction, follow the terms of such agreements. In no case will a non-Air Force agency have safety investigation jurisdiction.

4.10. Civilian Occupational Mishaps.

4.10.1. OSHA will be notified when an on-duty mishap resulting in an Air Force civilian employee fatality, to include heart attack victims, or involving the inpatient hospitalization of three or more people (one of which must be a DoD civilian employee) within 8 hours of an on-duty mishap (paragraph **2.7.7.3.**).

4.10.2. OSHA officials may accompany Air Force safety investigators as observers, or they may conduct a separate investigation of occupational mishaps involving either a DoD civilian fatality or the inpatient hospitalizations of three or more civilian personnel (one of which must be an on-duty DoD civilian employee). Ensure Air Force personnel accompany OSHA officials.

4.11. Special Circumstances.

4.11.1. Mishaps Involving Friendly Fire. Unless otherwise agreed, the Service whose forces suffer the preponderance of loss or injury will conduct a safety investigation at the discretion of the Combatant Commander and, after consultation and coordination with the Combatant Commander, through the Combatant Commander's Service Component. For mishaps involving other friendly nations, the involved Service Safety Chief shall consult with the DUSD (Installations and Environment) and the Combatant Commander to determine what role the other involved nations will play in the investigation. In those circumstances where the only forces lost or injured are those of other friendly nations, the Service conducting the safety investigation will be determined at the discretion of the Combatant Commander. Refer to DoDI 6055.07 and the Joint Service MOU (**Attachment 6**) for specific guidance on command relationships and reporting requirements.

4.11.2. Mishaps Involving Potential Criminal Acts. If safety investigators discover evidence of criminal acts causal to the mishap, they must immediately stop the investigation and notify the convening authority. The convening authority shall notify the responsible Military Criminal Investigative Organization, IAW DoDI 6055.07 (change 1), paragraphs 5.2.6.2 and E4.7.3, when he or she determines there is credible evidence of criminal activity. The convening authority will, after coordinating with AF/SE, determine whether the safety investigation should continue or be suspended pending the criminal investigation. Safety investigators will contact AFSC/JA to discuss this issue.

4.11.2.1. If the convening authority decides to suspend the safety investigation, investigators will give all non-privileged material to the legal investigators, provide them with the names of all known witnesses and safeguard all privileged material.

Chapter 5

SAFETY INVESTIGATIONS

5.1. General Information. The convening authority determines the depth of investigative effort required for each mishap, subject to this instruction and the appropriate discipline specific safety manual (AFMAN 91-22X). Several factors influence the depth of investigative effort required: severity of injury or occupational illness, future mishap potential, and whether another agency's investigation will produce a report the Air Force can use for mishap prevention. Other agencies, such as the local police or NTSB, may investigate mishaps that occur within their jurisdiction. A separate Air Force investigation will be completed when required by this instruction, however, the safety investigator may use the other agencies' reports and information when applicable.

5.2. Investigation Timeline. The safety investigation should be completed within 30 days of the mishap (See **Table 6.2.** for reporting time lines and exceptions). The investigation should place a greater priority on a complete and accurate safety report than on trying to finish in the 30 day timeline. If the investigation cannot be completed within this 30 day period, the SIB/SIO will request an extension from the convening authority. The SIB/SIO will annotate the extension and who it was approved by (office symbol) in each status message. EXCEPTION: There may be standing agreements for certain types of mishaps where the 30 day suspense is extended (see the discipline specific safety manual (AFMAN 91-22X)).

5.3. Investigation Funding.

5.3.1. Local Support. The commander of the Air Force installation hosting the SIB funds all in-house support even if the host installation is not assigned to the investigating MAJCOM. See paragraph **5.3.5.** for expenses that exceed the resources of the host installation. Occasionally, SIBs are required to work in areas where military support is not available. When civilian services are required, the Mission Support Group Commander at the installation supporting the SIB should assign imprest and contracting officers. The imprest officer will have authority and funds to pay for all support requirements (DoD Financial Management Regulation 7000.14-R, Volume 5, Disbursing Policy & Procedure, Chapter 2, Section 0209, Imprest Funds). The contracting officer must have a warrant (authority) to purchase equipment and services for the board.

5.3.2. TDY Travel. Each MAJCOM, via their respective wings/units, funds TDY of its assigned personnel who are Air Force SIB members or technical experts. TDY SIB members should be placed on full per diem for the duration of the SIB. Dual billeting, variations authorized, and rental car should be authorized. For joint service boards, each service funds its own members' TDY. The investigating MAJCOM funds travel costs of members from another service appointed to an Air Force SIB. Observers to an Air Force SIB fund their own TDY.

5.3.3. Contractor support. Normally contractors travel via their own funding. To provide easier access to the base and its facilities required during the investigation, the contractor may request a Letter of Identification from the Contracting Officer. The convening authority will honor these requests. The Letter of Identification will not have a fund cite, i.e., no cost to the government. Joint Travel Regulations, Volume 2, Appendix E, Part I, paragraph D and E are applicable.

5.3.4. Other Support. The convening authority funds leasing of special equipment/vehicles, leased communications, and other contractual services. For technical assistance and laboratory analysis

(paragraph 5.5.) from non-Air Force specialist, the convening authority or SM may have to provide funding to obtain a response.

5.3.5. Cost Overruns. Request an operating budget authority (OBA) adjustment per AFI 65-601, Volume 2, *Budget Management for Operations,* if investigation costs cannot be financed through reprogramming within the OBA.

5.4. Investigation Options. The size and membership of the investigation depends on the category and complexity of the mishap being investigated. The investigation must have the correct complement of members to properly complete the investigation. Investigations may be made up of multiple members (SIB), or a single member (SIO). Refer to the discipline specific safety manual (AFMAN 91-22X) for requirements. The SIB will inform the convening authority of all members of the investigation (SIB members, observers, and technical experts).

5.4.1. Safety Investigation Boards (SIB). SIBs are made up of multiple members assigned to investigate a mishap. Contractor representatives will not be primary members of a SIB. They are technical experts providing assistance to the SIB.

5.4.1.1. At least one SIB member must be equal to or senior in rank to the senior person directly involved in the mishap. Normally, the SIB president is the senior SIB member.

5.4.1.2. Select SIB members who do not have a personal interest in the investigation and who are able to act impartially. SIB members will be selected from outside the mishap wing whenever possible.

5.4.1.3. Select a SIB member qualified in safety investigation for each safety discipline involved in the mishap.

5.4.1.4. Do not assign foreign exchange officers or other foreign officers serving with the USAF as formal SIB members. This exclusion does not apply to AFSC SIB representatives. Comply with provisions in standing international agreements.

5.4.1.5. ARC participation in SIBs. Convening authority may appoint Reservists/Air National Guardsmen to SIBs with the concurrence of the AFRC/National Guard Bureau (NGB). Ensure SIB duties do not create a conflict of interest with the individual's civilian occupation or interests. MAJCOMS may execute MOUs/MOAs with AFRC and NGB to outline processes for nominating SIB members as needed on ARC-involved mishaps.

5.4.1.5.1. AFRC. Air Reserve Technicians may elect to participate in either military or civilian status, as appropriate. Traditional reservists will be in a military status.

5.4.1.5.2. ANG. ANG personnel may elect to participate in either military or technician status, as appropriate.

5.4.1.6. All safety investigations involving ARC assets that are conducted by a SIB shall be permitted to have at least one member selected by the AFRC or NGB, as applicable.

5.4.2. Single Investigating Officer (SIO). Depending on the circumstances of the mishap, an individual investigator may be appointed to conduct the investigation.

5.4.3. Air Force Participation in Non-Air Force Investigations. When Air Force representation to another Service's investigation is desired, AFSC will contact the MAJCOM(s) that can best meet the requirement. The MAJCOM/SE will coordinate the selection with AFSC. Once AF/SE approves the

nominee, AFSC will provide a fund site to the MAJCOM and establish direct communication with the individual. Air Force representatives to Joint Safety Investigations should be graduates of formal Air Force safety training courses.

5.4.4. Participation in Air Force Investigations by Non-Air Force Personnel. Sometimes a mishap involves weapon systems or equipment common to another US military service or agency (FAA, NASA, etc.). In these cases personnel from the other service or agency may request to observe the Air Force investigation. AFSC forwards these requests to the convening authority. Refer to AFI 91-206 and applicable MOAs/MOUs for interagency involvement. Observers are authorized to observe SIB activities and may participate to the extent authorized by the SIB president and published guidance. An observer is not a member of the Air Force SIB. Non-DoD observers may participate to the extent authorized by the SIB president. This should not include non-DoD observers' participation in or access to direct confidential testimony. EXCEPTION: For NTSB and FAA observers, see AFI 91-206.

5.4.5. UAS operations often require the creation of two ISBs to preserve evidence. The primary ISB is located at the base with the aircrew controlling the mission of the aircraft. The second ISB is located at the launch and recovery ground control station. The primary ISB will collect all of the supporting evidence from the second ISB.

5.4.6. In accordance with USD (AT&L) policy memo, all system-related Class A and B mishap investigation reports must include the System Program Office analysis of hazards that contributed to the accident and recommendations for materiel risk mitigation measures, especially those that minimize potential human errors.

5.5. Obtaining and Using Technical Assistance and Laboratory Analysis. When the investigation is beyond the expertise of the SIB/SIO, request technical assistance.

5.5.1. For all Class A and B mishaps, technical assistance and laboratory analysis will be requested through AFSC IAW published convening authority procedures. For all other mishap classes, technical assistance and laboratory analysis are available through AFSC. NOTE: See **Attachment 2** for technical assistance contact information.

5.5.2. Using Technical Experts.

5.5.2.1. Technical experts supporting an investigation are under the control and authority of the SIB president or SIO. This applies to DOD military and civilian personnel as well as contractor representatives. The SIB president or SIO should include technical experts in deliberations to formulate valid findings and viable recommendations.

5.5.2.2. Upon completion of their investigations, technical experts must provide a written report detailing results of their work. Suggested (but not mandatory) report formats are detailed in **Figure 5.1.** and **Figure 5.2.**

5.5.2.3. SIB presidents and SIOs must ensure a "non-disclosure statement" on protection of privileged data is prepared (**Figure A3.7.**) and endorsed by all non-Air Force SIB members (e.g., contractors, NTSB, FAA, etc.) offered a promise of confidentiality or provided access to privileged information. NOTE: See **paragraph 3.2.5.2**. for safety investigations where a promise of confidentiality is authorized. This memorandum is not required from Air Force civilian employees.

5.5.3. Reports from Technical Experts.

5.5.3.1. Reports from technical experts will be written for Part I, Part II, or both parts of the SIB report.

5.5.3.1.1. A technical report written for Part I will contain observations, analysis, and conclusions based solely on physical evidence, other factual information, and statements provided without a promise of confidentiality. This includes factual information presented during SIB discussions where the technical expert is present. This also includes focus on key factual data, detailed system descriptions or background information when it supports a technical expert's conclusions. Conclusions may address causes of the observed or documented conditions, but will NOT address the causes of the mishap. This does not preclude stating an opinion that a failure would likely create a certain condition, even if the mishap was inevitable under such a condition. Recommendations which relate to preventing the observed conditions may be included, but they will NOT address preventing the mishap. The SIB/SIO will thoroughly review all Part I reports from technical experts to ensure they do not contain privileged information. See **Figure 5.1.** for the suggested Technical Expert Report Format, Part I.

5.5.3.1.2. A technical report written for Part II may contain analysis, conclusions and recommendations based on privileged information to include confidential statements, appointed SIB member deliberations, or proprietary company information. Part II of the technical report is not meant to duplicate information provided in Part I, but to provide supplemental analysis and conclusions to assist the SIB in determining causes and recommendations. A Part II report is not required if technical expert analysis and conclusions can be based solely on physical evidence, other factual data, and statements made without a promise of confidentiality. See **Figure A3.8.** for the cover sheet on privileged reporting.

5.5.3.1.3. Contractor representatives requesting a claim of privilege/confidentiality of technical reports may submit a Part II only report, provided the Air Force maintains sole possession or control (paragraph 3.3.3.5.1). In this case, follow the **Figure 5.2.** Technical Expert Report Format, Part I and mark the entire document as a privileged report.

5.5.3.2. If conflicting reports from different technical experts or laboratories are received, include both reports in the formal report. In the investigative narrative, provide rationale explaining why one report is more applicable and why opposing views were discounted.

Figure 5.1. Suggested Technical Expert Report Format, Part I

Mishap System: Mission Design Series (MDS) and serial number

Mishap Date:

Investigator: Name, organizational address, and phone numbers.

INTRODUCTION: Factual Report of (state the intent of the report or analysis; purpose).

BACKGROUND: Not always required. If used, a statement of the mishap scenario, limited to facts.

OBSERVATIONS: Investigator observations of physical evidence, other factual data, and statements made without a promise of confidentiality.

ANALYSIS: Investigator evaluation of physical evidence, other factual data and statements made without a promise of confidentiality. Describe strong and weak points of analysis if appropriate. Examples:

CONCLUSIONS: Investigator conclusions and opinions based on analysis of physical evidence, other factual data and statements made without a promise of confidentiality. Do not include any opinion as to whether a particular failure contributed to or caused the mishap. This does not preclude stating an opinion that a failure would likely create a certain condition, even if the mishap was inevitable under such a condition. For example, an opinion could be expressed that a widget failure would have caused trim to move to the full nose up position, without making the connecting statement that such a trim position would inevitably cause a crash. Other examples?

Example 1

OBSERVATIONS: Three of the four right wing leading edge flap (LEF) actuators were recovered intact but separated from the wing. Measurement of each actuator's angular position revealed the following: 19.2 degrees down, 20.3 degrees down, and 19.8 degrees down.

ANALYSIS: The right wing LEF actuator positions correlated well with the expected LEF position of 19.6 degrees down based on the Mach, altitude, and AOA recorded by the CSFDR system just prior to impact.

CONCLUSION: The LEF on the right wing was properly positioned.

Example 2

OBSERVATIONS: The radome was found separated from the fuselage with relatively minor impact damage. The right AOA probe was bent; however, the slots appeared to be rotated up farther than normal, even taking into account impact damage. The left AOA probe sustained only minor damage and rotated freely. The left probe mid-range positioning differed significantly from what is expected of a correctly aligned probe. The pitot probe was not recovered.

ANALYSIS: The left and right AOA transmitters were removed to determine the actual mid-range (boresight) angle. The right AOA transmitter mid-range angle, as determined by alignment ring location, was 25.5° up; this is approximately 45° higher than the required mid-range value of 20° down. The right AOA alignment ring was incorrectly positioned. Removal of the left transmitter revealed it was also improperly installed. Only one of the two dowel pins was seated into the alignment ring. In addition, the left AOA alignment ring was also incorrectly positioned. The mid-travel angle of the left probe, as boresighted, was determined to be approximately 117° down, producing a positioning error of 97° down. The alignment and installation errors combined to produce a mid travel range of approximately 55° up or a total position error of 75°.

CONCLUSIONS: Both AOA transmitters were incorrectly installed. The position of the right AOA transmitter would cause an erroneously large AOA signal to be supplied to the flight control computer. The position of the left AOA transmitter would also cause an erroneously large AOA signal to be supplied to the flight control computer. Since a mid-value AOA selection process is used by the flight control computer, an erroneously large AOA signal was used by the flight control computer.

RECOMMENDATIONS: Investigator recommendations

Figure 5.2. Suggested Technical Expert Report Format, Part II

Mishap System: MDS and serial number

Mishap Date:

Investigator: Name, organizational address, and phone numbers.

INTRODUCTION: Part II Supplement to Factual Report of (state the intent of the report or analysis; purpose, identical to the Part I factual report statement).

OBSERVATIONS: Not required if the Part II report is a supplement to a Part I report that contains observations. Otherwise, investigator observations of physical evidence, other factual or privileged data, and statements made with or without a promise of confidentiality.

ANALYSIS: Investigator evaluation of physical evidence, other data, statements made with or without a promise of confidentiality, proprietary company data, and appointed SIB member deliberations. Describe strong and weak points of analysis if appropriate. Examples:

CONCLUSIONS: Investigator conclusions and opinions based on analysis of physical evidence, other data, statements made with or without a promise of confidentiality, proprietary company data, and appointed SIB member deliberations.

Examples:

RECOMMENDATIONS: Investigator recommendations, to include recommendations to prevent the mishap, related to the investigator's area of expertise.

5.6. Controlling Information Collected by the SIB/SIO. SIB presidents/SIOs will ensure that all information, privileged or not, collected by safety investigators, is not released outside safety channels except in accordance with this instruction or upon approval of the convening authority. The SIB president/SIO is the final point of release for all information (including electronic/digital media, photographs, etc.) from the safety investigation.

5.6.1. SIB presidents/SIOs will ensure that everyone working on their team is briefed on the restrictions. Every member of a safety investigation team that produces a formal report will sign the memorandum at **Figure 5.3.** acknowledging the guidance and restrictions placed on information gathered during a safety investigation. The memorandum will be filed in Tab A of the formal report.

5.6.2. The SIB/SIO is not prohibited from sharing information with technical experts who, although not members of a board, analyze information or wreckage on behalf of safety investigators.

5.6.3. Part 1 information is releasable to the AIB. However, portions of Part 1 are not releasable to the public since it may include information protected by the Privacy Act or Export Control Act contained in Part 1.

Figure 5.3. Memorandum Documenting Guidance to Investigators on Controlling Information.

1. The members, whose names and signatures appear below, of the safety team formed to investigate the mishap on (date of mishap) involving (aircraft/vehicle/equipment/etc.) have been advised by (name of board president/SIO) of the following:

a. This investigation is being conducted under the provisions of AFI 91-204 for the purpose of mishap prevention within the United States Air Force and to determine all factors relating to the mishap in order to prevent future mishaps.

b. It is very important that the investigating team avoid: tainting potential witnesses for this or any subsequent investigation; contributing to speculation about mishap causes; or releasing potentially offensive images to friends and/or families of those involved in a mishap.

c. All information, privileged or not, collected by safety investigators, will not be released outside safety channels except in accordance with AFI 91-204 or upon approval of the convening authority. The SIB president is the final point of release for all information (including electronic/digital media, photographs, etc.) from the safety investigation.

2. We understand and acknowledge the guidelines for controlling information collected by safety investigators. We understand unauthorized release of safety privilege information is punishable under Article 92(1), UCMJ, and may be grounds for disciplinary actions according to civilian personnel regulations, or may lead to contract actions.

5.7. Investigative Evidence.

5.7.1. Impounding Air Force Materiel/Wreckage. ISB/SIB/SIO have inherent priorities over other activities and investigations connected to the mishap (except criminal), including the right to impound Air Force property involved in the mishap. Group commanders or higher are required to act on their impoundment requests. However, safety of personnel (to include emergency response forces) and control of hazardous materials always take precedence over safety investigations, even at the risk of losing evidence. An installation commander in coordination with the ISB president or SIB president may choose to remove wreckage interfering with essential mission activities or causing a hazard at the mishap scene. Wreckage may need to be removed or destroyed to prevent interference with operations or vital civil functions. If wreckage must be moved prior to the arrival of the SIB/SIO, thoroughly document the site (photographs, video) prior to moving if time permits.

5.7.2. Life Sciences Evidence. The SIB will have access to many forms of Life Sciences evidence, including protected and personal medical information. This SIB will comply with safety privilege and with the Privacy Act of 1974 to protect this information. Include only that medical and personal information that is relevant to the mishap or incident to avoid unnecessary violation of the individual(s) privacy. This includes the physical exam, laboratory and radiological testing of survivors, personal equipment, life support equipment, medical/dental/mental health/substance abuse/family advocacy charts and past histories and initial medical interviews, and other information which points to the mental and physical capability of the personnel involved in the mishap. Human remains are also evidence. The SIB medical member should be aware of where all remains are and what their status is, i.e., awaiting autopsy, return to family, etc. Consult the mortuary officer of the supporting base to determine if civil authorities have jurisdiction over human remains. The mortuary officer should have an MOA/MOU with civil authorities according to AFI 34-242, *Mortuary Affairs Program*. Safety per-

sonnel, ISB and SIB medical members shall ensure AFIP is notified and given contact information for civil authorities exercising jurisdiction over human remains when a fatal mishap occurs.

5.7.3. Witnesses. Use the following guidelines for witnesses:

5.7.3.1. Do not administer truth serums, hypnotic techniques, drugs, or polygraph tests. If a witness provides a statement while under medication, add a notation of what medications they are taking to their statement.

5.7.3.2. If a witness refuses to testify, contact the commander, MAJCOM/SE, MAJCOM/JA and AFSC/JA.

5.7.3.3. Do not have witnesses testify under oath. Ensure witnesses understand that they are obliged to give honest, good faith testimony. See paragraph **3.4.5.** for a discussion on the promise of confidentiality.

5.7.3.4. If a safety investigator believes Air Force personnel questioned in the investigation may be guilty of criminal misconduct, refer to paragraph **4.11.2.**

5.7.3.5. Interviewing witnesses suspected of criminal misconduct. If, after suspending a safety investigation because of potential criminal acts, the convening authority decides to continue the safety investigation, safety investigators may have to interview witnesses suspected of criminal misconduct. Contact AFSC/JA if the SIB is required to interview suspected criminals.

5.7.3.6. Retaining Access to Participants. Safety investigators may need frequent access to or multiple interviews with participants in a mishap. Commanders will make all participants available to the investigation upon request of the SIB president/SIO. The SIB president/SIO will advise the commander when participants are no longer needed.

5.7.3.7. Returning Participants to Duty. Safety investigators make no determinations regarding the fitness of participants to be returned to normal duties. Commanders decide if and when participants are to be returned to duty.

5.7.3.8. Commercial Space Launch Mishap. Refrain from interviewing witnesses until the FAA/NTSB representative has arrived, unless there is a compelling reason to take the witness' statement(s) immediately.

5.7.3.9. This instruction requires collecting and maintaining information protected by the *Privacy Act of 1974* as authorized by Title 10 United States Code, section 8013 and Executive Order 9397.

5.7.3.9.1. Safety investigators will request the SSN of military members and civilian employees involved in reportable mishaps. Inform individuals that Title 10 USC 8013 and EO 9397 are the legal authority for requesting the SSN and that the SSN will be used for safety mishap investigating and reporting.

5.7.4. Disposing of Evidence.

5.7.4.1. Operational assets. Once the investigation has recovered all necessary evidence from the asset involved in the mishap, the safety investigator will, at an appropriate time, advise the convening authority (after coordinating with the legal board if required) when the asset can be turned over to the operating unit. The legal board is responsible for operational assets given to them by the SIB. The convening authority is the final authority to release the asset to the operating unit.

EXCEPTION: All wreckage from Class A space, aviation, and guided missile mishaps require a formal release from AFLOA/JACC before being released to the operating unit.

5.7.4.2. Wreckage.

5.7.4.2.1. After the SIB has gathered all necessary information from the wreckage, and there is a legal investigation, transfer custody of the wreckage to the legal board president in writing IAW AFMAN 91-22X.

5.7.4.2.2. Release wreckage not needed in support of depot, laboratory, or the legal investigation to the host installation commander in writing for storage until the wreckage is released for disposal. AFLOA/JACC is the release authority for Class A space, aviation, and guided missile mishaps. The host legal office is the release authority for all other mishaps.

5.7.4.2.3. All reasonable actions must be made to remove and properly dispose of wreckage. Special care must be given to the removal of all wreckage on private or state owned property.

5.7.4.3. Other Evidence.

5.7.4.3.1. For Class A mishaps, or when notified there will be a legal board for other mishaps, provide all non-privileged evidence (photographs, videotapes, data, documentation, and other evidence) to the legal board in writing IAW AFMAN 91-22X. The legal board will be responsible for final disposition of all material released to them by the SIB. For other than Class A mishaps, or when there is no legal board, contact the host installation staff judge advocate for guidance on disposing of materials that may be needed in potential claims or litigation. If there are no such requirements, reproduce enough copies for the safety report and then return the original documents and records used by the SIB to their proper custodian.

5.7.4.3.2. In the case of fatalities, the disposition of human bodies and human tissue is dependent on who has legal jurisdiction over the remains; often this may be a local civilian coroner or medical examiner. Work with Mortuary Affairs and the local JA to clarify jurisdiction and disposition of human remains.

5.8. Identifying Hazards.

5.8.1. The requirements in this section apply to all Class A and B mishaps. These same requirements can be applied to other occurrences if desired.

5.8.2. Identify and document hazards that played a role in the mishap sequence. Hazards are defined as "any real or potential condition that can cause injury or occupational illness to personnel; damage to or loss of a system, equipment or property; or damage to the environment." Determine whether individuals or management addressed these hazards during preparation and execution of the mishap sequence.

5.8.3. For system-related mishaps, determine whether the System Program Office previously identified the hazards that played a role in the mishap sequence and had included those hazards in its Systems Engineering System Safety ESOH risk management efforts.

5.9. Determining and Documenting Findings.

5.9.1. Findings are based on the weight of evidence, professional knowledge, and good judgment.

5.9.2. Each finding is a single event or condition. Each finding is an essential step in the mishap sequence, but each finding is not necessarily causal. Do not include any more information than is necessary to explain the event.

5.9.3. Each finding must have a logical connection to preceding findings. If no logical relationship exists, the sequence of the mishap has not been correctly described.

5.9.4. Ensure critical events required to sustain the mishap sequence have not been omitted. Conversely, do not include events interesting to the reader, but not necessary to sustain the mishap sequence.

5.9.5. In some cases the sequence begins long before the actual mishap sequence with such things as design problems, improperly written directives, or an inadequate training program.

5.9.6. Ensure the sequence continues to the point where all damage or injury has occurred and the initial rescue or recovery actions are completed.

5.9.7. Include injuries occurring in the mishap, at the appropriate chronological point in the event sequence. For example, insert ejection injury events occurring before the aircraft-ground impact finding at the proper chronological point. Injuries or fatalities suffered by persons on the ground following a crash would be at the end of the main sequence, (e.g., "the Range Safety Officer successfully initiated the self-destruct sequence; debris from the launch booster crashed into a fishing boat, fatally injuring two people" or "the pilot ejected successfully; the aircraft crashed in a parking lot adjacent to the runway, fatally injuring two persons").

5.9.8. Findings are arranged in chronological order. Number the findings consecutively. Precede each number with the word "Finding" (e.g., Finding 1, Finding 2, etc.).

5.9.9. Write findings as full sentences, not bullet points. Use past tense, since the events occurred in the past. (Example: Incorrect – Crew chief clears pilot from chocks and the pilot taxis to runway. Correct – The crew chief cleared the pilot from the chocks and the pilot taxied to the runway.)

5.9.10. When the safety investigator cannot pinpoint a correctable event in a sequence, list as much of the sequence as can be supported and insert a statement relating to the undetermined area. If there are supportable alternatives identify them as such and list them. Show them as subordinate to the applicable finding by using a format such as "event X most likely occurred due to one or more of the following reasons."

5.9.10.1. The reasons should be listed from most probable to least probable.

5.9.10.2. Do not list all of the possible alternatives that could have existed merely because they cannot be eliminated. Place this sort of conjecture in the analysis and narrative.

5.9.11. Do not include people's names, call signs, names of Air Force bases or companies in the findings. Use terms such as "the aircraft," "the flight lead," "the wingman," "the F-16 pilot," "the pilot," "the crew," "the instructor loadmaster," "the evaluator boom operator," or "the crewchief." Be specific, but do not include supporting evidence in the findings. The report narrative includes supporting evidence and conclusions.

5.9.12. Findings shall not include new material not addressed in the narrative. If the finding is not identifiable in the narrative, you have not written the narrative completely.

5.9.13. After developing the findings, apply the following "Findings Test" for validation:

5.9.13.1. Is the Finding necessary to sustain the mishap sequence?

5.9.13.2. Is the Finding a single event or condition?

5.9.13.3. Is the Finding specific enough without including supporting evidence?

5.9.13.4. Does the Finding logically connect to the preceding finding? Read the last finding; ask "why"? Does the finding above answer the "why"? Continue for each finding.

5.9.13.5. Is the Finding relevant or simply interesting to the reader?

5.10. Determining and Documenting Causes.

5.10.1. A cause is a deficiency, which if corrected, eliminated, or avoided, would likely have prevented or mitigated the mishap damage or significant injury. Cause does not imply blame. The intent is to identify the point where corrective action is needed.

5.10.2. Findings that sustained the mishap sequence, but were normal to the situation as it developed are not causal. In most instances a causal finding is correctable by commanders, supervisors, or individuals.

5.10.3. Apply the reasonable person concept when determining a cause. If a person's performance or judgment was reasonable considering the mishap circumstances, do not assign cause. It is not appropriate to expect extraordinary or uniquely superior performance in such cases. Human factors (physiological or psychological) may be causal even though they are reasonable. These are often the unavoidable effects of a preceding cause.

5.10.4. Do not list a party as causal for not taking an action unless they should reasonably have been expected to take such action, but they did not. Similar rationale applies to lack of a system or procedure. Do not list failure to provide a system or procedure as causal unless a party should reasonably have been expected to do so given the information available prior to the mishap.

5.10.5. Risk management is an expected function for all organizations, and improper risk management is considered a deficiency that can be causal in a mishap. (See guidance in AFI 91-202 and AFI 90-901). In cases where a mishap has identified hazards, there is a responsibility to assess the associated risks, evaluate risk mitigation options, implement risk management measures, evaluate the residual risks, document approval at the appropriate level (see AFI 91-202, chapter 11) to accept the expected residual risks in terms of consequences and probability of occurrence, and monitor the effectiveness of the risk control measures implemented. Each recurrence of a mishap requires a reassessment of the prior risk management decisions. Do not cite risk acceptance as a causal finding when all risk management functions were properly accomplished and a quantified level of risk was accepted at the appropriate level.

5.10.6. Not every finding is causal. Some are effects or the expected result of a previously identified cause even though their inclusion sustains the sequence leading to the mishap. An engine flameout precipitated by a fuel boost pump failure is the expected result of the boost pump failure and is not causal. The boost pump failure may have been a result of an even earlier cause such as a bearing failure.

5.10.7. Environmental conditions such as a bird strike, lightning, high wind, solar wind, meteorites, or flood, may be causal only if all reasonable avoidance and damage/injury mitigation actions were taken.

5.10.8. An individual, group or organization is virtually always responsible for a failure. Publications or objects should almost never be found causal. Rather, the party responsible for ensuring the publications are correct or the party responsible for ensuring an object does not fail with catastrophic consequences is causal, unless the party took all reasonably expected actions. In such cases, there may be process or organizational failures, and appropriate parties may be identified as responsible for these failures.

5.10.8.1. The intent of identifying causal parties in an investigation is to identify the point where corrective action is needed, not to place blame. As such, safety investigators need to ensure they identify the correct causal agent. This can be done by asking "Why" something occurred until the investigator comes to a "dead end."

5.10.9. Occasionally, an investigator may not be able to conclusively determine a specific causal event. In these special cases, the investigator may choose to list two or three most probable causes for each option. In rare instances the causal event may be unknown.

5.10.10. Causal findings should always be worded in active voice, clearly identifying the actor(s) and causal action (deficiency), along with any necessary explanation. Examples: Passive – No safety pins were installed in the widget. Active – The crew chief failed to install safety pins in the widget as required by tech orders. Passive – Mission planning did not cover en-route obstacles. Active – The crew failed to address en-route obstacles in mission planning as required.

5.10.11. Identify causal findings by adding the word "CAUSE" to the beginning of the finding statement. Do not list causes under a separate heading. Word a causal finding as a clear and simple statement of a single condition or event.

5.10.12. Causal findings should identify the causal agent ("Who") and the action taken ("What"). Why the action (or lack of action) occurred should be fully explained in the narrative and may be included in the causal finding if appropriate.

5.10.13. After determining the causal findings, apply the following "Cause Test" for validation:

5.10.13.1. Is the Causal Finding correctable by commanders, supervisors or individuals?

5.10.13.2. Is the Causal Finding a clear and simple statement of a single condition or event?

5.10.13.3. Is the Causal Finding in the active voice and does it follow the format: Who did what to whom/what and why?

5.10.13.4. If the Causal Finding is an effect or an expected result of a previously identified cause, even though its inclusion sustains the mishap sequence, it is not causal.

5.11. Determining and Documenting Recommendations.

5.11.1. Recommendations are feasible and effective solutions to eliminate identified hazards, or if the hazard cannot be eliminated, to mitigate the hazard's potential consequences. With few exceptions, all safety investigations (including Class E reports) should include recommendations to prevent or mitigate future mishaps. If no recommendations are made, investigators will explain their rationale in the report narrative. Ensure the investigation supports the recommendations. Do not make recommendations for the sole purpose of having recommendations.

5.11.2. Developing feasible and effective recommendations is a methodical process, which seeks to identify risk mitigation alternatives. It is essential to know precisely what deficiency, or identified hazard, one is addressing and to stay focused on it.

5.11.3. Developing sound recommendations also requires recognition of the "order of precedence" concept, which recognizes that not all risk mitigation alternatives are equal. Design fixes are the most preferable solution because they can often completely eliminate the hazard, but these types of fixes often have the highest upfront costs. They may require unacceptable operational constraints so additional alternatives must be considered. Along with design fixes, one should look for potential fixes that incorporate safety and warning devices. Lastly, look at changes to procedures and training.

5.11.4. All recommendations should target one or more of the hazards identified during the investigation. It is also sometimes prudent to make two or more recommendations against one hazard. In all cases use the order of precedence to develop risk mitigation alternatives. As an example, to eliminate or mitigate the identified hazard of "pilot's failure to command landing gear extension," which results in a gear-up landing of a training aircraft, one might consider the following:

5.11.4.1. Design: Implement a fixed gear.

5.11.4.2. Incorporate Safety Devices: Implement an auto-extend system.

5.11.4.3. Provide Warning Devices: Implement cockpit warning lights, warning tone or voice.

5.11.4.4. Develop Training and Procedures: Improve the written checklist, or its use via training with instructors and in simulators.

5.11.5. Based upon the specific information discovered during the investigation, selected alternatives should be formulated into feasible and effective recommendations and other alternatives discarded. The purpose of using the 'order of precedence' is to ensure investigations consider the entire range of available options and not just the cheap and easy ones – which usually have the least mishap prevention value.

5.11.6. A great deal of debate usually surrounds what is feasible and effective. Sometimes a risk mitigation alternative is technically feasible and effective, but it is clearly not economically feasible or has unacceptable mission consequences. In this case, discard the alternative. In other cases it may not be clear that an alternative is either technically feasible or economically feasible. In these cases, include a recommendation for formal evaluation.

5.11.7. Most causal findings should have recommendations for future prevention or mitigation, although exceptions are permitted. Likewise, findings that are not causal may also have recommendations written against them.

5.11.8. Recommendations may also vary in scope. Some actions can be taken at unit level. Other recommendations require MAJCOM or other agency actions.

5.11.9. If a recommendation depends on tests or analyses that are incomplete when the report is transmitted, explain this and provide a reference to the tests or analyses (such as deficiency report, study, or contract number).

5.11.10. Recommendations should require the action agency to correct a deficiency rather than to implement a particular solution. The action agency normally has greater expertise than the investigators and should be given the opportunity to develop the optimal solution for a problem. The following examples illustrate this point: Poor – Move the right engine fire pushbutton to the right side of the

cockpit. Better – Implement changes to the engine fire pushbuttons to help preclude engine shutdown errors.

5.11.11. Avoid recommendations that only require a study or evaluation. Action should be required based upon results of any recommended study. In most cases, it is not necessary to recommend a study or evaluation, since studies or evaluations are implicit in the process. The recommendation can simply require corrective action. Examples: Poor – Evaluate the feasibility of changes to the anti-lock system. Better – Implement changes to the anti-lock system to prevent loss of feedback.

5.11.12. General, vague, sweeping, or open-ended recommendations that cannot be closed by the action agency are not appropriate. Write recommendations that have a definitive closing action.

5.11.13. Do not recommend briefing personnel on the mishap. Such a briefing is a basic commander responsibility and a normal function of safety offices at all levels of command.

5.11.14. Do not recommend reminding (or CC's reminding/briefing/publishing an FCIF to remind) personnel of the importance of simply doing their jobs properly. However, recommendations to place CAUTIONS and WARNINGS in TOs guidance relating the adverse consequences of not doing one's job properly may be appropriate. Recommendations for specific action such as refresher training, implementing in-process inspections, etc., to ensure job duties are being properly performed, may also be appropriate since they are specific and can be closed.

5.11.15. Number recommendations consecutively and precede each number by the word "Recommendation." (e.g., Recommendation 1, Recommendation 2, etc.). Include only one statement for each recommendation. Rather than sub-grouping recommendations (e.g., 1a, 1b, 1c, etc.) use a new recommendation number.

5.11.16. Recommendations to Change Publications.

5.11.16.1. Recommendations may be made to change publications, technical orders, flight manuals, or checklists. Submit AF Form 847, *Recommendation for Change of Publication* (flight publications), according to AFI 11-215, *Flight Manuals Program*. Submit AFTO Form 22, *Technical Manual Change Recommendation and Reply*, according to TO 00-5-1, *Air Force Technical Order System*. Utilize local base support personnel (Stan Eval and/or QA) for assistance in completing the forms. If the proposed change is time sensitive, use the emergency critical safety hazard message format in AFI 11-215 or the emergency report format in TO 00-5-1.

5.11.16.2. Obtain tracking number from MAJCOM Stan Eval for AF Forms 847 and unit QA for AFTO Forms 22. Place the tracking number and the mishap's AFSAS number on submitted Forms 847 or 22, to ensure these recommendations receive the appropriate levels of review. Also, place the tracking number after corresponding recommendation in the final message/report. Submit completed forms to the MAJCOM Stan Eval or LG Command Control Point (CCP), as applicable after the investigation is complete (paragraph **6.5.**).

5.11.16.3. In all cases, protect privileged safety information by sanitizing (paragraph **3.3.1.**) the "reason for recommended change" section of AFTO Form 22 or AF Form 847. The SIB/SIO will place copies of the submitted forms in the applicable formal report tab.

5.11.17. Determining the appropriate action agencies for each recommendation.

5.11.17.1. Assign action agencies for all recommendations. An office of primary responsibility (OPR) is required for every recommendation. Although an office of collateral responsibility

(OCR) is not required, they are appropriate for many recommendations. List only one OPR per recommendation. More than one OCR may be listed for an individual recommendation. Limit OPR and OCR assignment to two or three-digit organizational levels to ensure proper management level attention.

5.11.17.2. Assign OPRs and OCRs based upon the lead command and user command philosophy. The Air Force assigns responsibility for overall management of each system to a "lead command" to ensure that all requirements associated with every system receive comprehensive and equitable consideration. This lead command provides primary input into the process of developing and maintaining a force structure with a balance of complementary capabilities, and it establishes a basis for rational allocation of scare resources among competing requirements. See AFPD 10-9, for more information.

5.11.17.3. Normally, if a recommendation requires funding to effect changes to a weapon system (e.g., performing risk analyses or engineering studies, developing aircraft or component modifications, obtaining new test or support equipment, etc.), assign the appropriate office for the mishap weapon system, within the lead command as OPR. If the lead command only provides funds for the effort and another organization is responsible for performing or managing the work, assign these organizations as OCRs. For example: Implement changes to the B-1 to reduce the probability of encountering "hot brake" temperatures. OPR: ACC/A8 OCR: OC-ALC/XXX. In this example ACC/A8A is assigned as OPR because, as the appropriate office in the lead command, they would be responsible to arrange for the funding required to effect changes to the aircraft. Assuming that funding is provided, the B-1 system program office at OC-ALC/XXX is assigned as OCR since they would either perform the required work in-house or manage the contracted effort.

5.11.17.4. Not all funding comes from the lead command. Sometimes it is possible for a system program office, item management office, laboratory or other organization to fund efforts through separate budgets. If a recommendation does not require funding from the lead command to effect changes to a weapon system (e.g., performing risk analyses or engineering studies, developing and obtaining preferred spares, developing inspection techniques and procedures, simple modifications and testing of software in conjunction with scheduled updates, limited flight and ground testing, etc.), assign the appropriate office that has the funding as OPR. Assign OCRs as required.

5.11.17.5. Although changes to training programs, training equipment, and publishing new or changed paper documents (e.g., Air Force Policy Directives, Air Force Instructions, flight manuals, technical orders, etc.), require funding, assign the organization responsible for controlling the content of these products as OPR. Assign OCRs as required.

5.11.17.6. Sometimes the responsibility for a recommendation lies outside the Air Force (e.g., the FAA for various air traffic control issues). Since the Air Force may not have the authority to task such agencies to perform recommended actions, do not assign non-Air Force agencies as OPRs or OCRs. In these cases, write the recommendation as an Air Force action and assign the appropriate Air Force organization as OPR. This Air Force organization is typically responsible for interaction with or contractual oversight of the outside agency and will ensure proper recommendation evaluation and disposition. Assign OCRs as required.

5.11.17.7. Field Operating Agencies (FOA) normally accomplish Air Force-level actions. For example, air traffic issues are managed by the Air Force Flight Standards Agency (AFFSA), not the Deputy Chief of Staff for Air and Space Operations (AF/A3/5). Similarly, Air Force Civil

Engineer Support Agency (AFCESA) is the manager for civil engineering issues in the Air Force. However, the Air Staff may be tasked as an OPR/OCR, where appropriate.

5.11.17.8. SIB/SIO is responsible for coordinating all recommendations with their proposed action agencies (OPR and OCR). Ensure the correct OPR and OCR(s) are identified through positive contact (call or email them) prior to publishing the formal report or final message.

5.11.17.8.1. Include the office symbol, commercial telephone number, and email address of one OPR action officer for each recommendation. Place this information in the dedicated data field provided by AFSAS.

5.11.17.8.2. Do not include recommendations without listing contact information for each OPR. Contact the convening authority safety office to ensure proper action agencies have been identified.

5.11.18. In accordance with USD (AT&L) policy memo, all system-related Class A and B mishap investigation reports will consider System Program Office recommendations for materiel risk mitigation measures, especially those that minimize potential human errors.

5.12. Determining and Documenting Other Findings and Recommendations of Significance (OFS, ORS). Guidance for developing and documenting primary findings and recommendations applies similarly to OFSs and ORSs.

5.12.1. Other Findings of Significance (OFS) are findings that the safety investigators believe could contribute to future mishaps and/or which warrant command attention, but were not part of the mishap sequence. OFS should be listed following the mishap recommendations in message and formal reports.

5.12.2. Other Recommendations of Significance (ORS) are recommendations resulting from OFS. Each OFS will be followed by its corresponding ORS. Assign an OPR(s) to each ORS.

5.13. Releasing Investigative Information. It is Air Force policy to keep the public informed of Air Force mishaps and safety investigations and to release non-privileged information, both favorable and unfavorable. Air Force policy complies with the requirements of Title 10, United States Code, Section 2254(b) regarding the public disclosure of certain non-privileged aircraft accident investigation information. The SIB president is the final point of release for all information (including electronic/digital media, photographs, etc) from the SIB, but will not communicate directly with the media or other members of the public. The release of non-privileged information to news media, relatives, and other agencies is through the AIB president, Survivor Assistance Program point of contact, Family Liaison Officer, or Public Affairs representative as appropriate.

5.13.1. The convening authority or designated information officer releases factual information about a mishap, including photographs, only as directed in AFI 35-101*, Public Affairs Policies and Procedures*, and AFI 51-503, *Aerospace Accident Investigations*. Officials involved in the safety investigation are not permitted to be the officials releasing the information to the media or other members of the public.

5.13.2. The AIB, in accordance with AFI 51-503 or Ground AIB, in accordance with AFI 51-507, can release factual mishap information upon request. If an AIB is not formed, the local commander, through the public affairs or legal office, will release factual information. Information will not be released if it will jeopardize national defense, impede an ongoing or pending investigation (including

the SIB or AIB), or if it is privileged safety information. The SIB president will coordinate with the AIB president as to whether the release of information will impede the SIB's investigation.

5.13.3. Following mishaps where AFI 51-503 does not apply (nuclear, explosives and chemical agents, directed energy, afloat, motor vehicle, off-duty, ground and industrial) the convening authority through the public affairs or legal office may release factual information. Information will not be released if it will jeopardize national defense, impede an ongoing or pending investigation (including the SIB or legal investigation) or if it is privileged safety information. The SIB president will coordinate with the legal board president as to whether the release of information will impede the SIB's investigation.

5.14. Coordinating with the Legal Board.

5.14.1. The SIB president provides Part 1 of the formal report and certain factual information to the AIB President as soon as possible (prior to completion of the investigation). See discipline specific safety manual for further guidance.

5.14.1.1. Examples of information given to the legal board president include (this list contains examples only); a list of witnesses, cockpit and tower audio recordings, data recorders, coroner's report, autopsy report, toxicology test results, police reports, personnel and medical records.

5.14.2. Persons occupying full-time safety positions routinely examine privileged documents. They are not permitted to serve on legal investigations as long as they are performing full-time safety duties. Legal investigators will not attend SIB/SIO proceedings, or meetings, or have access to or discuss any Part 2 privileged information with the SIB/SIO or Air Force safety officials. This prohibition also applies to the briefing given to the convening authority on the safety investigation results.

5.14.3. ISB/SIB/SIO members will not be witnesses for other boards investigating the same mishap except to provide Part 1 factual information or to provide purely factual information within their knowledge that is not otherwise available.

5.14.4. ISB/SIB/SIO members and technical advisors will not act as investigators or technical advisors for a legal investigation of the same mishap.

Chapter 6

REPORTS AND BRIEFINGS

6.1. General Information. Safety reports include message reports (preliminary, status, and final), formal reports, and injury and occupational illness forms and logs. Whenever possible, safety reporting will be via the Air Force Safety Automated System (AFSAS). Use the following URL for AFSAS: **https://afsas.kirtland.af.mil**. If AFSAS is not available, see paragraph **3.6.** The timeline for reporting mishaps and flag words are covered in **Table 6.2.** For Class A, B and other investigations requiring a formal report, the convening authority briefing (if required) should be delivered not later than 45 days post-mishap or 15 days after completing the investigation, whichever is later. All Class A and B mishaps require a formal report unless waived by the Air Force Chief of Safety (AF/SE). The convening authority or AF/SE may also require a formal report for any other mishap if determined necessary. The formal report (if required) will be published 3 days after the convening authority briefing or 30 days post mishap if no briefing to convening authority was required. Briefing investigation results are covered in paragraph **6.4.** The convening authority will determine what investigations can be briefed to the NAF/CC and COMAFFOR (paragraph **6.4.1.**) and what investigations will be briefed to the convening authority. Aviation mishaps involving fatalities or other mishaps when requested, require a briefing to the CSAF and SECAF. AF/SEI will be the focal point for scheduling all briefings to the CSAF and SECAF. If a final message or formal report needs to be changed after it is completed, all primary SIB members must coordinate on all changes, as only the primary SIB members are authorized to change the report. The discipline specific safety manuals (AFMAN 91-22X) provide guidance on primary SIB members.

6.1.1. Report classified mishap information (the classified portion of safety reports) via AMHS. Report the unclassified portion of the report using AFSAS with classified data masked.

6.1.2. On initial response, use the highest reasonably-expected cost estimate to determine the mishap class and downgrade if additional cost information indicates a lower class is warranted.

6.2. Safety Message Reports. These safety reports are licensed as a part of the "Mishap Message Reports" group (RCS: HAF-SE(AR)9402). Produce safety messages during declared or war emergency conditions (emergency status code C2) IAW AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

6.2.1. Guidelines

6.2.1.1. Messages will be marked with appropriate privileged markings IAW paragraph **3.5.**

6.2.1.2. **Table 6.2.** and the discipline specific safety manual (AFMAN 91-22X) provide message reporting requirements.

6.2.1.3. Do not include Privacy Act information in messages, to include but not limited to, names and social security numbers.

6.2.1.4. Message Reports During MINIMIZE. During emergency condition MINIMIZE, send only the following messages by electronic transmission:

6.2.1.4.1. Preliminary and status messages on nuclear mishaps and safety deficiencies resulting in a significant degradation of nuclear surety or having a serious operational impact (such as a possible code compromise).

6.2.1.4.2. Preliminary and status messages on Class A and B on-duty mishaps.

6.2.1.4.3. Send all other messages by first-class mail within 7 working days of the established timeline until MINIMIZE is canceled. MAJCOMs may consolidate messages from their units and subsequently mail them to addressees outside their command within 15 working days.

6.2.2. Preliminary Message. The first electronically transmitted safety message advising of a non-nuclear mishap or event is entitled Preliminary Message. Preliminary messages are fully releasable. They will contain factual information only and will not contain safety-protected or privileged information. Although OPREP-3 reports do not satisfy this requirement, safety personnel are encouraged to assess safety-related information released in OPREP-3 reports, since OPREP-3 reports are often the first avenue of communication to senior leadership.

6.2.3. Status Messages: Status messages are sent to explain report delays/extensions and relay new information discovered since the previous message. Status messages may include investigative conclusions such as what areas are considered to be factors and areas considered unlikely to be factors. If the status message is explaining a safety report delay/extension, explain the reason for the delay and the expected completion date. Safety investigators may send status messages as they deem necessary. Required status messages are listed in **Table 6.2.** Status messages are normally privileged.

6.2.3.1. The convening authority's safety staff will closely follow mishaps that have damage estimates close to the threshold limits or injuries/occupational illnesses that have the potential for improving or worsening.

6.2.3.2. A status message is required when a mishap class or category changes, e.g., due to updated damage cost figures, a subsequent death from mishap injuries, or erroneous initial categorization.

6.2.3.2.1. When a mishap classification increases, issue a status message within 1 day.

6.2.3.2.2. When a mishap classification decreases, issue a status message within 10 days.

6.2.4. Final Message. This message provides a narrative of the mishap/event sequence, states the mishap cause, and recommends preventive actions. It contains the investigation, analysis, and conclusions of the safety investigator. It is written so the reader clearly understands how the findings and causes were determined and clearly states the role of the individuals found causal in the mishap sequence. Include logic in how the recommendations were chosen as well as OPR/OCRs for the recommendations. The message may also include other findings and recommendations of significance, which do not relate directly to the causes of the mishap, but can be of value in risk management and mishap prevention. The final message is privileged. Complete the investigation and prepare the final message within the specified time limits in **Table 6.2.** The convening authority will release the final message after the investigation is complete (paragraph **6.5.**). The convening authority may delegate this responsibility to the SIB/SIO. DO NOT delay release of the final message for internal command staffing or costing/injury analysis.

6.3. Formal Reports. Formal reports present detailed factual and analytical information about mishaps. They are made up of Air Force Form 711-series forms and attached exhibits. All forms in the Air Force Form 711-series are licensed as "Safety Investigation Reports" (RCS: HAF-SE(AR) 9404). Formal reports will be released during declared or war emergency conditions (emergency status code C2) IAW AFI 33-324.

6.3.1. Privileged formal reports contain two-parts: Part 1, Factual Information and Releasable Material; and Part 2, Board Conclusions and Non-releasable Material. There may also be supplemental information such as comments messages for MOFE, MOFE, and any other significant information that was received after the MOFE was released.

6.3.1.1. Part 1 contains factual information that may be disclosed outside the Air Force; Part 2 contains privileged safety information and will not be displayed/disclosed outside Air Force Safety channels (ref. **Chapter 3**). Questions about handling and/or distribution of safety report information should be referred to AFSC/JA.

6.3.1.2. Tabs. **Table 6.1.** contains Tab designations for Parts 1 and 2. See discipline specific safety manual (AFMAN 91-22X) for specific guidance on tab usage and contents.

6.3.1.2.1. No tab data available. Investigations that have no data for certain tabs do not require waivers for those tabs. Example: Tab N, Transcripts of Voice Communications. If there are no recorded communications, the SIB will include a memo in the Tab N stating there was no such information available.

6.3.1.2.2. Not-applicable tab data. If the SIB/SIO determines the content of a tab in Part 1 is not applicable to the mishap, that tab may be waived by the convening authority. If waived, the SIB/SIO will include a memo in the tab stating that the convening authority waived the content of that tab (reference **Figure 6.2.**) and briefly explain, in Tab T, why the tab content was omitted. Waiver authority to exclude tabs from Part 2 is AF/SE.

Table 6.1. USAF Mishap Report Tabs.

TAB	USAF SAFETY REPORT
	Part 1 – Factual Information and Releasable Material
A	Distribution Memorandum and Safety Investigator Information
B	Not Used
C	Preliminary Message Report
D	Maintenance Report, Records, and Data
E	Not Used
F	Weather and Environmental Records and Data
G	Personnel Records
H	Egress, Impact, and Crashworthiness Analysis
I	Deficiency Reports
J	Releasable Technical Reports and Engineering Evaluation
K	Mission Records and Data
L	Data From On-Board Recorders
M	Data from Ground Radar and Other Sources
N	Transcripts of Voice Communication
O	Any Additional Substantiating Data and Reports
P	Damage and Injury Summaries
Q	Legal Board Transfer Documents
R	Releasable Witness Testimony
S	Releasable Photographs, Videos, and Diagrams
	Part 2 – Board Conclusions and Non-Releasable Material
T	Investigation, Analysis, and Conclusions
U	Witness Testimony Provided Under a Promise of Confidentiality
V	Other Supporting Privileged Products
W	Technical Reports and Engineering Evaluations Provided under a Promise of Confidentiality
X	Privileged Photographs, Videos, and Diagrams
Y	Life Sciences and Medical Reports
Z	SIB Final Products

6.3.2. MAJCOMs or AFSC may direct preparation of a formal report for any mishap, even under circumstances where this instruction does not specifically require one.

6.3.3. Formal reports will be formatted and assembled IAW with the discipline specific safety manual AFMAN 91-22X.

6.3.4. Distributing the Formal Report

6.3.4.1. The convening authority will distribute privileged formal reports to those in the Air Force with a need to know. Distribute the formal report to addressees as listed in the discipline specific safety manual (AFMAN 91-22X). If there is a requirement to brief the convening authority, do not distribute the formal report prior to that briefing. Do not provide copies or extracts to agencies outside the Air Force. If an agency outside the Air Force needs a copy of the formal report for mishap prevention, corrective actions, or other purpose, notify AFSC/JA by message or telephone before sending copies to these organizations.

6.3.4.2. Do not produce "information only" copies of formal reports.

6.3.4.3. The SIB president may keep a complete copy of the formal report (for briefing purposes) for 60 days. List this copy on the distribution memorandum and return it to the convening authority safety office for disposition.

6.3.4.4. Formal reports will be maintained IAW AFMAN 33-363, *Management of Records* and disposed of IAW Air Force Records Disposition Schedule (RDS) located at **https://webrims.amc.af.mil**.

6.3.5. All system?related Class A and B mishap formal reports must include the System Program Office analysis of hazards that contributed to the accident and recommendations for materiel risk mitigation measures, especially those that minimize potential human errors.

6.4. Briefing Investigation Results. Once the SIB completes the investigation and finalizes the formal report and the final message, the SIB will provide briefings at the discretion of the convening authority. All briefings will be given with no prior screening of content. Board independence is critical to the integrity of the SIB process. Historically, SIB independence is a Congressional interest item, periodically reviewed by Government Accountability Office (GAO) and DoD/IG. The convening authority will dictate briefing attendance. Prior to this briefing, the MAJCOM/NAF Chief of Safety will brief the convening authority on rules set forth in **Paragraphs 6.4.** and **6.5.** of this regulation. Briefing slides are available at **http://afsafety.af.mil/SEF/SEFF_SIB.shtml.**

6.4.1. When the MAJCOM is the convening authority and with MAJCOM/CC approval, the SIB may brief the NAF/CC (or equivalent such as the Air Warfare Center Commander) and the affected COMAFFOR for a contingency mishap, for INFORMATIONAL PURPOSES ONLY, prior to briefing the MAJCOM/CC. All other briefings or disclosures of the report content are prohibited. Prior to this briefing, the NAF Chief of Safety will brief the NAF/CC on rules set forth in **Paragraph 6.4.** of this regulation. Briefing slides are available at **http://afsafety.af.mil/SEF/SEFF_SIB.shtml.**

6.4.1.1. The NAF/CC (and COMAFFOR) and those invited per this instruction to the informational briefing will not direct changes to the SIB report or direct further investigation. The briefing must be free from the appearance of undue command influence that advice and directions can sometimes create.

6.4.1.2. Except as noted below, the only personnel authorized to attend the informational NAF/CC briefing are the NAF/CC, and with NAF/CC concurrence, the NAF/SE and the mishap Wing Commander. In the case of an ANG mishap, in addition to the above authorized attendees, the Director of the Air National Guard, and the mishap units' state Adjutant General may attend. In the case of an AFRC mishap, in addition to the above authorized attendees, the mishap AFRC NAF/CC, AFRC NAF/SE and the mishap Wing Commander may attend. For COMAFFOR infor-

mation briefings, authorized attendees are the COMAFFOR, and with COMAFFOR concurrence, the AFFOR/SE, and the mishap air expeditionary wing commander.

6.4.1.3. In instances where the convening authority has been delegated, there will be no intermediate or informational briefings prior to briefing the convening authority.

6.4.2. Safety investigation briefings will be afforded the same protection given the formal report. The following format is a guide to building the briefing:

6.4.2.1. Title Slide. Include mishap type, unit, vehicle or material, date, time of occurrence, and SIB president.

6.4.2.2. SIB Composition. Show SIB members as well as technical experts consulted and used at the mishap scene.

6.4.2.3. Overview. In bullet format present the basic circumstances of the mishap and give the bottom line cause(s) of the mishap.

6.4.2.4. Personnel Background. Give a chronological list of assignments for personnel involved and their experience. Include skill and training qualifications. List the member's name on the slide. Consider a subjective appraisal of the personnel if appropriate.

6.4.2.5. Mishap Sequence. Use as many slides as necessary. Map/route segments, vertical view of maneuvers, artist's conceptions, or models can be helpful. Explain what should have happened if things had gone right, who was in charge, the rules of engagement and if they were followed, where things went wrong and what the involved persons should have done.

6.4.2.6. Areas Investigated and Determined Not To Be a Factor. Do not dwell on these. A listing is usually adequate.

6.4.2.7. Areas Found To Be Factors in the Mishap. Discuss each in detail in follow-up slides. Be sure to discuss training, supervision, discipline, tactics, and weather, as appropriate.

6.4.2.8. Findings and Causes. Use the number of slides necessary without overcrowding.

6.4.2.9. Conclusions and Recommendations. Use the number of slides necessary without overcrowding.

6.4.2.10. Other Findings and Recommendations of Significance. Number sequentially. Place "Other Finding of Significance One" followed by "Other Recommendation of Significance One."

6.4.2.11. Comments. Convening authority comments.

6.4.2.12. Backup slides as determined by the SIB president. May include:

6.4.2.12.1. 72-Hour and 14-Day Medical History. Be prepared to brief the 72-hour and 14-day history.

6.4.2.12.2. Maintenance History on Aircraft or Vehicle. Include significant write-ups, Time Compliance Technical Orders (TCTO), and material problems.

6.4.2.12.3. Any other pertinent information that supports the findings, conclusions, and recommendations.

Table 6.2. Reporting Schedule.

	Class A Mishap			Class B Mishap			Class C Mishap			Class D Mishap			Class E Event		
	Prelim	**Status**	**Final**	**Prelim**	**Status**	**Final**	**Prelim**	**Status**	**Final**	**Prelim**	**Status**	**Final**	**Prelim**	**Status**	**Final**
Aviation	24 hr[5]	10 day[1]	30 day	24 hr[5]	10 day[1]	30 day[2]	--	--[3,4]	30 day[2]	--	--[4]	30 day	--	--[3]	30 day
Ground	8 hr[5]	10 day[1]	30 day	8 hr[5]	10 day[1]	30 day[2]	--	--[3,4]	30 day[2]	--	--[4]	30 day	--	--[3]	30 day
Weapons	8 hr[5]	10 day[1]	30 day	8 hr[5]	10 day[1]	30 day	--	--[3,4]	30 day	--	--[4]	30 day	--	--[3]	30 day
Space	8 hr[5]	10 day[1]	90 day	8 hr[5]	10 day[1]	90 day	--	--[3,4]	30 day	--	--[4]	30 day	--	--[3]	30 day

1 = Status reports required at day 10, 30, 60, 90 and every 30 days thereafter until complete.

2 = 60 days if engine or engine module is processed through depot.

3 = Status reports required at day 30, 60, 90 and every 30 days thereafter until complete.

4 = Input of OSHA injury information required by day 6.

5 = If there is a delay in reporting the mishap the reporting time will begin upon notification to the safety office.

NOTE: Class A and B off-duty military mishaps normally do not require a formal report. See AFMAN 91-224 for additional guidance.

6.5. Convening Authority Actions. The convening authority has two options upon the completion of an investigation. The investigation is considered complete when the final message, formal report (if required), and briefing to the convening authority (if required) are accomplished.

6.5.1. Accept the report as written and release the final message and formal report (if a formal report was required). Do not staff the final message or formal report before release. It is important the SIB results remain free from any appearance of influence.

6.5.2. Direct the SIB president and its members to conduct additional investigations. The convening authority will provide additional guidance to the SIB to ensure the report fulfills the purpose, intent, and requirements of the Air Force Mishap Prevention Program.

6.5.2.1. After the SIB re-examines the areas identified by the convening authority and completes their reinvestigation, the convening authority will have the same two options outlined above. Once this sequence is completed, the convening authority will release the final message. Do not delay release of the final message or formal report for internal command staffing or final costing/injury determination.

6.6. Notifying Person(s) Found Causal in Formal Reports. When a formal report mentions a USAF individual (military member or civilian employee) as causal in the findings, that individual (i.e., causal individual) will be given an opportunity to submit a witness statement commenting on the findings. This statement is in addition to any other witness statements or testimony provided by the individual. The statement is considered privileged safety information and will be handled and protected IAW this instruction. Use the guidelines below to notify causal individuals and forward their comments:

6.6.1. Use the memorandum in **Figure 6.1.** to notify the causal individual(s).

6.6.2. The SIB President/SIO will provide the convening authority safety office with the notification memorandum for individuals found causal in their investigation. Once the convening authority accepts the formal report and releases the final message, the convening authority will send a copy of the memorandum to the mishap unit safety office. Individuals must not be notified until after the SIB out briefs the convening authority and the final message is released. The mishap unit (wing or equivalent) Chief of Safety will notify the causal individual(s).

6.6.3. The causal individual(s) may use only the final message to make additional comments. The individual(s) will not be allowed access to the formal report. The individual(s) may not remove the final message from the safety office nor copy portions of any of the safety reports pertaining to the mishap naming that individual causal.

6.6.4. The individual(s) has 15 days to submit the statement back to the mishap unit (wing or equivalent) safety office. The individual(s) must submit a statement, though the statement may simply acknowledge the opportunity to comment and decline to do so.

6.6.5. The unit (wing or equivalent) Chief of Safety will forward any statements to the convening authority SE and a copy to AFSC for use in preparation of the MOFE.

6.6.6. If the causal individual is attached or assigned to another MAJCOM, the convening authority sends a copy of the final message and the memorandum in **Figure 6.1.** to the person's immediate commander with a cover memorandum. Provide information copies to the individual's MAJCOM/SE. The cover memorandum should caution the commander against taking any disciplinary or other adverse action based upon the safety investigation and instruct the commander to:

6.6.6.1. Notify the person of their opportunity to review relevant findings and to provide a witness statement within 15 days.

6.6.6.2. After obtaining causal individual's statement forward it to AFSC with a copy to the convening authority.

6.6.7. Notifying Non-Air Force Military Personnel and Civilians Outside Air Force Jurisdiction. Non-Air Force personnel are not offered the opportunity to review Air Force safety investigation messages or formal reports, nor to submit witness statements in these cases. This includes Air Force personnel serving outside the Air Force, such as with the Defense Logistics Agency or NATO. EXCEPTION: Those Non-Air Force personnel assigned to fly Air Force aircraft and afforded safety privilege IAW paragraph **3.3.3.**, are authorized to submit a witness statement as long as they still meet the previously mentioned criteria.

Figure 6.1. Opportunity To Submit Additional Comments.

(date)

MEMORANDUM FOR (Individual's Rank and Name)

FROM: (Rank and Name), SIB President

SUBJ: Opportunity to Submit Additional Comments

1. The SIB investigating the mishap involving (Aircraft Type and Tail Number), which occurred on (Date), named you in its safety investigation report.

2. A copy of the final message is available for your review at (Location) Safety Office. You cannot remove the message from that office nor reproduce any portion of it. The message is for official use only, and information contained therein is privileged, not releasable in whole or in part to persons or agencies outside the US Air Force without the express approval of the disclosure authorities specified in AFI 91-204.

3. You are required to indorse the original of this memorandum indicating receipt and your intention to either decline commenting on the findings or provide an additional comment. If you provide an additional comment, it is privileged and becomes part of the safety investigation report. It shall be used solely to determine all factors relating to the mishap and, in the interest of mishap prevention, to preclude recurrence. Your statement will be considered by the HQ Air Force Safety Center during the mishap review process.

4. If you decide to provide a Witness Statement, deliver one signed, reproducible copy to (Location), not later than 15 days from receipt of this letter.

SIB President Signature Block

Receipt acknowledged on _____ date.

Intention:

a._____I decline commenting on the safety investigation message findings.

b._____I will submit a statement commenting on the safety investigation message findings and furnish it as instructed not later than (Date-individual is given 15 days to make comments).

Signature Block of Witness

FOR OFFICIAL USE ONLY.

This contains privileged, limited-use safety information. Unauthorized use or disclosure can subject you to criminal prosecution, termination of employment, civil liability, or other adverse actions. See AFI 91-204, **Chapter 3** for restrictions. Destroy in accordance with AFMAN 33-360 when no longer needed for mishap prevention purposes.

(SAMPLE)

Figure 6.2. Convening Authority Waiver of Tab for Non-Applicability

(date)

MEMORANDUM FOR RECORD

FROM: Name, Rank (SIO/SIB BP)

SUBJECT: Convening Authority Waiver of Tab

During the course of this safety investigation, I determined that all contents of Tab __ were not applicable to this mishap. Under my advisement, the convening authority granted a waiver on (DD MMM YY) authorizing the exclusion of Tab __ , in its entirety, from this report.

SIB BP / SIO Signature Block

(SAMPLE)

Chapter 7

FOLLOW-UP ACTIONS

7.1. Review Process. Follow-up actions start when the final message is released. Reviewing authorities for safety reports include AFSC, and higher levels in the investigative chain of command (e.g., NAF/Center and MAJCOM).

7.1.1. The reviewing authority is tasked to assess the final message/formal report and determine the overall adequacy. If the narrative, findings, causes, or recommendations (including OPR/OCR assignments) do not meet the standards set forth in this instruction, they will reject the message.

7.1.2. If during the review process the convening authority or higher authority learns facts that were not available to safety investigators or that shed new light on the published findings, causes, and recommendations, he or she may do one of the following:

7.1.2.1. Reopen the safety investigation.

7.1.2.2. Include the new facts in the Comments Message for Memorandum of Final Evaluation (MOFE).

7.1.3. The review process should be accomplished within seven days of the convening authority releasing the final message.

7.2. Memorandum of Final Evaluation (MOFE). Organizations will review Class A and B final message/formal reports and send their response back to AFSC within 45 days after final message release by the convening authority. Comments received after the 45 day deadline may not be considered in the MOFE unless an extension is granted through AFSC/SEFO.

7.2.1. AFSC will publish a MOFE on all on-duty Class A safety reports within 90 days after release of the final message. Additional MOFE requirements and exemptions are specified in AFMAN 91-22X.

7.2.2. AFSC will consider inputs from the following in preparation of the MOFE:

7.2.2.1. Convening authority.

7.2.2.2. Lead command of weapons system (AFPD 10-9).

7.2.2.3. Air component commanders of unified commands when the mishap occurred during contingency operations. NOTE: The unified command staff offices must agree to safeguard the information according to rules contained in this instruction.

7.2.2.4. Designated action agencies (OPR/OCRs).

7.2.2.5. Commander of the mishap wing.

7.2.2.6. Statements of person(s) found causal in the formal report.

7.2.2.7. Air Force agencies outside the investigating command if their functions were involved in the mishap (e.g., HQ AFFSA/A3A for air traffic services and airfield management, DCMA for mishaps involving contracts managed by DCMA).

7.2.2.8. Unsolicited comments. Agencies and organizations reviewing the final message report may comment on the investigation, findings, causes, and recommendations even though they are neither in the chain of command nor a designated action agency.

7.2.3. AFSC prepares the MOFE as an evaluation of the formal report/final message. AFSC considers the comments provided by the convening MAJCOM and all other inputs as listed in paragraph **7.2.2.** The MOFE may make changes to the findings, causes, and recommendations (including OPR/OCR assignments). However, the MOFE will not make changes to the narrative or the other findings/recommendations of significance.

7.2.3.1. If the MOFE adds a person to a causal finding or significantly changes a person's role in the findings, AFSC will notify the individual's MAJCOM safety office and will provide the individual an opportunity to submit a witness statement, following the procedures in paragraph **6.6.**

7.2.4. AF/SE is the releasing authority of the MOFE. AFSC will normally release the MOFE via AFSAS. When transmitted, the MOFE becomes the official Air Force position on findings, causes, and recommendations.

7.3. Managing Recommendations.

7.3.1. Release of the final message is an official tasking for agencies identified as OPRs for corrective actions. MAJCOMs will use AFSAS to effectively manage final disposition of recommendations and ORSs resulting from mishaps and events. If a recommendation is discovered to have applicability beyond the identified OPR, MAJCOM/SEs should notify AFSC/SE so additional appropriate recommendations can be created.

7.3.2. To determine closure approval authority for primary recommendations and other recommendations of significance use **Table 7.1.** and **Table 7.2.** For on-duty Class A and B recommendations, AFSC is the approval authority for closure of primary recommendations. The OPR must request closure from the approval authority who decides if the closing action is acceptable. For Class A and B mishaps, if the action taken is different from the proposed actions of the recommendation, the OPR's MAJCOM CC/CV (or Materiel Safety Task Group Chair/System Safety Group Chair/Center Commander in AFMC) must approve the request for closure. For Class C, D and E mishaps, if the action taken is different from the proposed actions of the recommendation, the OPR's commander (or 2-letter director for recommendations at MAJCOM level) must approve the closing action. (Ex: If the OPR for a Class C recommendation is the MAJCOM/A4M and they choose an alternate method of mitigating the hazard, the MAJCOM/A4 must approve the closing action. If the OPR is in the Maintenance Group the Wing/CC must approve the closing action.)

Table 7.1. Closure Approval Authority for Primary Recommendations

<table>
<tr><th colspan="2" rowspan="2"></th><th colspan="6">OPR:</th></tr>
<tr><th>HAF</th><th>MAJCOM</th><th>NAF</th><th>Wing</th><th>Group</th><th>Squadron</th></tr>
<tr><td rowspan="5">Mishap/Event Class</td><td>A</td><td rowspan="5">AFSC</td><td colspan="5" rowspan="2">AFSC if On-Duty Mishap
MAJCOM if Off-Duty Mishap</td></tr>
<tr><td>B</td></tr>
<tr><td>C</td><td rowspan="3">MAJCOM</td><td rowspan="3">NAF</td><td colspan="3" rowspan="3">Wing</td></tr>
<tr><td>D</td></tr>
<tr><td>E</td></tr>
</table>

Table 7.2. Closure Approval Authority for ORSs

<table>
<tr><th colspan="2" rowspan="2"></th><th colspan="6">OPR:</th></tr>
<tr><th>HAF</th><th>MAJCOM</th><th>NAF</th><th>Wing</th><th>Group</th><th>Squadron</th></tr>
<tr><td rowspan="5">Mishap/Event Class</td><td>A</td><td rowspan="5">AFSC</td><td colspan="5" rowspan="2">MAJCOM</td></tr>
<tr><td>B</td></tr>
<tr><td>C</td><td rowspan="3">MAJCOM</td><td rowspan="3">NAF</td><td colspan="3" rowspan="3">Wing</td></tr>
<tr><td>D</td></tr>
<tr><td>E</td></tr>
</table>

7.3.3. Other safety offices are afforded the opportunity in AFSAS to coordinate on a recommendation's closing action. Coordination must occur within 30 calendar days of the OPR requesting closure.

7.3.4. The OPR must provide updates in AFSAS every 6 months until closed. The following are examples of acceptable updates toward closing actions:

7.3.4.1. Actions planned or taken.

7.3.4.2. Results of development or testing.

7.3.4.3. Significant problems encountered.

7.3.4.4. Delays experienced.

7.3.4.5. Rationale for decision made, to include details of supporting risk analysis.

7.3.4.6. Concurrence and non-concurrence by other agencies.

7.3.4.7. Estimated completion date.

7.3.5. The following examples are acceptable closing actions with proper annotation:

7.3.5.1. Recommended changes to all applicable publications were issued/fielded. Corrective action annotations must include, as a minimum, the name and/or designation of the publication changed (i.e. 1B-2A-1), the date of the publication, and the affected page numbers.

7.3.5.2. Recommended modifications to all applicable systems or items were completed. Corrective action annotations must include, as a minimum, that the design change has been fielded and/or what percentage of the affected parts within the fleet have been modified. In most cases, the design change must have been implemented on all affected systems to warrant closure.

7.3.5.3. Recommended studies or evaluations were completed, conclusions were validated, and actions on all validated requirements were completed. In these cases, the OPR shall include detailed rationale, to include a risk analysis, to support their conclusions.

7.3.5.4. Recommended changes to training were completed. If the training changes were captured in a publication, see **7.3.5.1.** above. Otherwise corrective action annotations must include, as a minimum, the implementation method of the new training, the date implemented, and the currency requirement for the training.

7.3.5.5. Recommended actions were not implemented due to resource constraints, operational constraints. Corrective action annotation must include, as a minimum, a statement that a risk analysis was performed, a description quantifying residual risk, and a statement of risk acceptance at the appropriate level. For Class A and B mishaps, risk acceptance will include MAJCOM CC/CV concurrence. If the recommendation is not implemented due to a completed programmed removal/retirement of the system or item from service then the completion date of the removal/retirement must be annotated. If the system is not completely removed from service at the time of the closure request then a risk analysis and risk acceptance statement is required.

7.3.6. Request closure only after all actions have been completed and properly annotated.

7.3.7. Lead MAJCOM/A3 will brief and advocate SIB recommendations at the flight manual and technical order review boards. For Class A and B mishaps, if recommended changes are disapproved by the flight manual or technical order review boards, MAJCOM/SE will ensure the appropriate directorate (A3/A4) is aware of the disapproval. Forward copies of completed changes to AFSC/SEFO for AF/SE review.

7.3.8. MAJCOM/DRU/FOA/NGB will establish a Mishap Review Panel (MRP) or equivalent process (e.g., Materiel Safety Task Group) for all safety disciplines to ensure Class A and B mishap recommendations, for which they are OPR, are methodically addressed and risks are accepted at the appropriate level in accordance with AFI 91-202. The MRP or similar process will meet once every six months. The MRP should also address recommendations waiting for the MOFE. A consolidated recommendation status report is due to AFSC on 15 Nov and 15 May every year. The report will be compiled using data as of 30 Sep and 30 Mar each year (end of FY and end of second quarter). This report will cover all disciplines.

7.4. Forms.

7.4.1. Forms prescribed.

7.4.1.1. AF Form 190, *Occupational Illness/Injury Report*

7.4.1.2. AF Form 711A, *USAF Safety Report Checklist and Index.*

7.4.1.3. AF Form 711B, *USAF Mishap Report.*

7.4.1.4. AF Form 711C, *Aircraft/UAV Maintenance and Materiel Report*

7.4.1.5. AF Form 711D, *Nuclear Mishap/Incident Report.*

7.4.2. Forms adopted.

7.4.2.1. DD Form 250, *Material Inspection and Receiving Report.*

7.4.2.2. OSHA Form 300, *Log of Work-Related Injuries and Illnesses.*

7.4.2.3. OSHA Form 300A, *Summary of work-Related Injuries and Illness.*

WENDELL L. GRIFFIN, Major General, USAF
Chief of Safety

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

DoDD 3150.8, *DoD Response to Radiological Accidents,* 13 June 1996

DoD Regulation 5400.7/Air Force Supplement, *DoD Freedom Of Information Act Program,* 24 June 2002

DoDD 5400.11-R, *DOD Privacy Program*, 14 May 2007

DoD Regulation 6025.18-R, *DoD Health Information Privacy Regulation,* 24 January 2003

DoDI 6055.07, *Accident Investigation, Reporting and Record Keeping*, 3 October 2000

CJCSM 3150.01A, *Joint Reporting Structure General Instructions*, 20 December 2002

CJCSM 3150.03A, *Joint Reporting Structure Event and Incident Reports*, 20 December 2002

Joint Travel Regulations, Volume 1, *Uniformed Service Members*, 1 April 2007

Joint Travel Regulations, Volume 2, *Department of Defense Civilian Personnel*, 1 April 2007

ASIC AIR STD 85/02A, *Investigation of Aircraft/Missile Accidents/Incidents*, 20 February 2004

NATO STANAG 3101, *Exchange of Safety Information Concerning Aircraft and Missiles*, 27 March 2007

NATO STANAG 3102, *Flight Safety Co-operation in Common Ground/Air Space*, 27 March 2007

NATO STANAG 3318, *Aeromedical Aspects of Aircraft Accident/Incident Investigation*, 19 August 2004

NATO STANAG 3531, *Safety Investigation and Reporting of Accident/Incidents Involving Military Aircraft and/or UAVs*, 28 March 2007

5 USC 552, *Freedom of Information Act*

5 USC 552a, *Privacy Act*

10 USC 2254, *Treatment of Reports of Aircraft Accident Investigations*

22 USC 2751 *et seq*., *Arms Export Control Act*

29 USC 657 *et seq*., *Inspections, Investigations, Recordkeeping*

29 CFR 1904 *et seq*., *Recording and Reporting Occupational Injuries and Illnesses*

29 CFR 1960 *et seq., Basic Program Elements for Federal Employee Occupational Safety and Health Program and Related Matters*

50 USC Appendix sec 2401-2420, *Export Regulation*

50 USC 1701 *et seq., International Emergency Economic Powers*

AFPD 10-9, *Lead Command Designation and Responsibilities for Weapons Systems*, 8 March 2007

AFI 10-206, *Operational Reporting*, 4 October 2004

AFI 10-220(I), *Contractor's Flight and Ground Operations*, 1 March 2007

AFI 10-601, *Capabilities Based Requirements Development*, 31 July 2006

AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*[3] 24 January 2007

AFI 11-215, *Flight Manuals Program (FMP)*, 6 April 2005

AFI 11-401, *Aviation Management*, 7 March 2007

AFOSH STD 48-139, *Laser Radiation Protection Program*, 10 December 1999

AFI 13-202, *Overdue Aircraft,* 18 March 1994

AFI 31-401, *Information Security Program Management,* 1 November 2005

AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program,* 1 April 1999

AFMAN 32-4004, *Emergency Response Operations,* 1 December 1995

AFI 33-201V1, *Communications Security (COMSEC),* 1 May 2005

AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections,* 1 June 2000

AFI 33-332**,** *Privacy Act Program,* 29 January 2004

AFI 33-360, *Publications and Forms Management*, 18 May 2006

AFI 33-364, *Records Disposition-Procedures and Responsibilities*, 22 December 2006

AFI 34-217, *Air Force Aero Club Program,* 1 February 1997

AFMAN 34-232, *Aero Club Operations,* 7 February 2007

AFI 34-242, *Mortuary Affairs Program,* 2 April 2008

AFI 34-1101, *Assistance to Survivors of Persons Killed in Air Force Aviation Mishaps and Other Incidents,* 1 October 2001

AFPD 35-1, *Public Affairs Management,* 17 September 1999

AFI 35-101, *Public Affairs Policies and Procedures,* 29 November 2005

AFMAN 36-363, *Management of Records,* 1 March 2008

AFI 36-3002, *Casualty Services,* 25 July 2005

AFI 40-201, *Managing Radioactive Materials in the US Air Force*, 13 April 07

AFI 51-503, *Aerospace Accident Investigations*, 16 July 2004

AFI 51-507, *Ground Accident Investigations,* 15 October 2004

AFI 60-106, *The United States Air Force International Military Standardization Program*, 1 December 1997

AFI 63-1201, *Life Cycle Systems Engineering*, 23 July 2007

AFI 65-503, *US Air Force Cost and Planning Factors*, 4 Feb 1994

AFI 65-601 Volume 1, *Budget Guidance and Procedures*, 3 March 2005

AFI 65-601 Volume 2, *Budget Management for Operations*, 21 October 1994

AFPD 91-2, *Safety Programs*, 28 September 1993

AFI 91-101, *Air Force Nuclear Weapons Surety Program*, 19 December 2005

AFI 91-109, *Air Force Nuclear Reactor Program*, 1 January 1999

AFI 91-110, *Nuclear Safety Review and Launch Approval for Space or Missile Use of Radioactive Material and Nuclear Systems*, 28 June 2002

AFI 91-202, *The US Air Force Mishap Prevention Program*, 1 August 1998

AFI 91-206, *Participation in a Military or Civil Aircraft Accident Safety Investigation*, 8 July 2004

AFPAM 91-210, *Contract Safety*, 14 February 1994

AFPAM 91-211, *USAF Guide to Aviation Safety Investigation*, 23 July 2001

AFMAN 91-221, *Weapons Safety Investigations and Reports*, 18 Jun 04

AFMAN 91-222, *Space Safety Investigations and Reports*, 9 Aug 05

AFMAN 91-223, *Aviation Safety Investigations and Reports*, 6 Jul 04

AFMAN 91-224, *Ground Safety Investigations and Reports*, 1 Aug 04

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program*, 1 June 1996

AFI 99-151, Air-Launched Missile Analysis Group (ALMAG), 10 August 2005

OSHA 3245-01R, *OSHA Recordkeeping Handbook*, 2005

TO 00-5-1, *AF Technical Order System*, 15 October 2006

TO 00-35D-54, *USAF Materiel Deficiency Reporting and Investigating System,* 15 March 2006

TO 1-1-638, *Repair and Disposal of Aerospace Vehicles*, 1 January 1999

Abbreviations and Acronyms

A&AS—Advisory & Assistance

AF—Air Force

AFCESA—Air Force Civil Engineer Support Agency

AFFN—Air Force Foreign Nationals

AFFOR—Air Force Forces

AFFSA—Air Force Flight Standards Agency

AFI—Air Force Instruction

AFIP—Armed Forces Institute of Pathology

AFJI—Air Force Joint Instruction

AFLOA—Air Force Legal Operations Agency

AFLOA/JACC—Air Force Legal Operations Agency Tort Claims and Litigation Division

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFOSH—Air Force Occupational and Environmental Safety, Fire Protection, and Health

AFOTEC—Air Force Operational Test and Evaluation Center

AFPAM—Air Force Pamphlet

AFPD—Air Force Policy Directive

AFRC—Air Force Reserve Command

AFSAS—Air Force Safety Automated System

AFSC—Air Force Safety Center or Air Force Specialty Code

AFSPC—Air Force Space Command

AIB—Accident Investigation Board

AIG—Addressee Indicator Group

AIR STD—Air Standard

AM—Airfield Management Personnel

AMHS—Automated Message Handling System

AMIC—Aircraft Mishap Investigation Course (AMIC)

ANG—Air National Guard

AOR—Area of Responsibility

APU—Auxiliary Power Unit

ARC—Air Reserve Component

ASIC—Air and Space Interoperability Council

ATC—Air Traffic Control

BASH—Bird/Wildlife Aircraft Strike Hazard

BP—Board President

CA—Convening Authority

CC—Commander

CD-R—Compact Disk-Recordable

CDI—Commander Directed Investigation

CFR—Code of Federal Regulations

CMA—Controlled Movement Area

COMAFFOR—Commander, Air Force Forces

CONTRIB—Contributing

CONUS—Continental United States

COP—Continuation Of Pay

COS—Chief of Safety

CPO—Civilian Personnel Office

CSAF—Chief of Staff, United States Air Force

CVR—Cockpit Voice Recorder

DAACO—Drug and Abuse Control Officer

DAF—Department of the Air Force

DB—Data Base

DCMA—Defense Contract Management Agency

DD FORM—Department of Defense Form

DED—Directed Energy Device

DEW—Directed Energy Weapon

DO—Doctor of Osteopathy

DoD—Department of Defense

DOD—Domestic Object Damage

DoD XX-R—Department of Defense Regulation

DODD—Department of Defense Directive

DODI—Department of Defense Instruction

DOT—Department of Transportation

DR—Deficiency Report

DRU—Direct Reporting Unit

DSN—Defense Switched Network

DTRA—Defense Threat Reduction Agency

ECM—Electronic Countermeasures

ECP—Engineering Change Proposal

EOC – Emergency Operations Center

EPA—Environmental Protection Agency

EPAF—European Participating Air Forces

EPU—Emergency Power Unit

FA—First Aid

FAA—Federal Aviation Administration

FAA/AST—Federal Aviation Administration/Associate Administrator of Space Transportation

FAX—Facsimile Machine

FDR—Flight Data Recorder

FEBA—Forward Edge of the Battle Area

FOA—Field Operating Agency

FOD—Foreign Object Damage

FOIA—Freedom of Information Act

FOUO—For Official Use Only

FSAT—Full Scale Aerial Target

FSNCO—Flight Safety Non Commissioned Officer

FSO—Flight Safety Officer

FT—Fatal (injury)

FY—Fiscal Year

GAO—Government Accountability Office

GMV—Government Motor Vehicle

GS—General Schedule

GSA—General Services Administration

GSU—Geographically Separated Unit

GVO—Government Vehicle Other

HAP—High Accident Potential

HATR—Hazardous Air Traffic Report

HE—High Explosive

HIPAA—Health Insurance Portability and Accountability Act

HO—Historian

HRO—Human Resources Office

HQ—Headquarters

AF/SE—Air Force Chief of Safety

AFSC/JA—Assistant for Legal Matters

AFSC/SEF—Aviation Safety Division

AFSC/SEG—Ground Safety Division

AF/SEI—Issues Division, Office of the Chief of Safety

AFSC/SEW—Weapons Safety Division

IAW—In Accordance With

IC—Incident Commander

ICC—Installation Control Center

ICAO—International Civil Aviation Organization

ID—Identification

IFSD—In Flight Shutdown

IG—Inspector General

IO—Investigating Officer

ISB—Interim Safety Board

JA—Judge Advocate

LT—Lost Time (case)

LRU—Line-Replaceable Unit

MAAF—Mishap Analysis and Animation Facility

MAJCOM—Major Command

MC—Mission Capability

MDS—Mission Design Series

MD—Medical Doctor

MGCS—Missile Guidance Control Set

MHAP—Mishap / High Accident Potential

MINA—Mishap Investigation Non-Aviation

MK—Mark

MOA—Memorandum of Agreement

MOFE—Memorandum of Final Evaluation

MOU—Memorandum of Understanding

MRP—Mishap Review Panel

MSE—Missile Support Equipment

NAF—Nonappropriated Fund or Numbered Air Force

NASA—National Aeronautics and Space Administration

NATO—North Atlantic Treaty Organization

NDA—National Defense Area

NGB—National Guard Bureau

NGB/CF—Director, Air National Guard

NL—No Lost Time (case)

NM—Nautical Mile

NRO—National Reconnaissance Office

NTSB—National Transportation Safety Board

NWCA—Nuclear Weapons and Counter Proliferation Agency

OBA—Operating Budget Authority

OCR—Office of Collateral Responsibility

ODS—Ozone Depleting Substance

OMB—Office of Management and Budget

OPCON—Operational Control

OPR—Office of Primary Responsibility

OPREP—Operational Report

ORS—Other Recommendations of Significance

OSI—Office of Special Investigations

OSHA—Occupational Safety and Health Administration

OSS&E—Operational Safety, Suitability, and Effectiveness

OT&E—Operational Test and Evaluation

OWCP—Office of Workers' Compensation Program

PA—Public Affairs

PDO—Publishing Distribution Office

PEO—Program Executive Offices

PH—Public Health

PME—Professional Military Education

PMV—Private Motor Vehicle

PP—Permanent Partial (disability)

PPE—Personal Protective Equipment

PT—Permanent Total (disability)

QA—Quality Assurance

R&D—Research and Development

RAV—Risk Assessment Values

RCN—Remote Control Number

RCS—Report Control Symbol

RDS—Records Disposition Schedule

ROA—Remotely Operated Aircraft

RPV—Remotely Piloted Vehicle

SAF—Secretary of the Air Force

SAS—Safety Automated System

SE—Chief of Safety

SECAF—Secretary of the Air Force

SES—Senior Executive Service

SIB—Safety Investigation Board

SIO—Single Investigation Officer

SJA—Staff Judge Advocate

SM—Statute Mile or Single Manager

SPO—System Program Office

SRU—Shop Replacement Unit

SSE—Space Support Equipment

SSN—Social Security Number

STANAG—Standardization Agreement

STAN/EVAL—Standardization/Evaluation

TCTO—Time Compliance Technical Order

TDPFO—Temporary Duty Pending Further Orders

TDR—Teardown Deficiency Report

TDY—Temporary Duty

TED—Transfer Effective Date

TO—Technical Order

UAS—Unmanned Aerial System

UAV/UAS—Unmanned Aerial Vehicle

UCAV—Unmanned Combat Aerial Vehicle

UCMJ—Uniform Code of Military Justice

UR—Unsatisfactory Report

URL—Universal Resource Locator

US—United States

USA—United States Army

USAF—United States Air Force

USAFR—United States Air Force Reserve

USC—United States Code

USCENTAF—United States Central Command Air Forces

USCG—United States Coast Guard

USMC—United States Marine Corps

USN—United States Navy

USSOUTHCOM—United States Southern Command

VP—Vice President

WB—Wage Board

YOP—Youth Opportunity Program

Terms

AERO CLUB AIRCRAFT—These are all aircraft assigned to the respective Aero Club. The Aero Club through purchase, lease, or loan from the government may have acquired these aircraft. Aero Clubs are authorized excess DoD and General Service Administration (GSA) aircraft on a loan basis.

AEROSPACE VEHICLES—DoD aircraft, UAV/UASs, missiles, and space vehicles.

AFLOAT MISHAP—An Air Force mishap occurring on board, or as the result of, a DoD vessel. This also includes DoD diving or swimmer operations. This term includes mishaps occurring while loading and/or off-loading or receiving services at dockside and mishaps occurring up to the high water mark during amphibious or inshore warfare training operations. It applies also to all injuries to DoD personnel occurring on board, whether or not job-related. Fatalities and/or injuries occurring on board that result from shipyard, repair facility, or private contractor operations are not afloat mishaps.

AIRCRAFT GROUND OPERATIONS MISHAP—Aircraft Ground Operations (AGO) mishap. Aircraft Ground Operations are mishaps that involve DoD aircraft with no intent for flight that result in reportable damage to DoD aircraft, injury, or fatality.

AIRCRAFT FLIGHT MISHAP—Any mishap in which there is intent for flight and reportable damage to a DoD aircraft. Explosives and chemical agents or guided missile mishaps that cause damage in excess of $20,000 to a DoD aircraft with intent for flight are categorized as aircraft flight mishaps to avoid dual reporting. This is the only aviation mishap subcategory that contributes to the flight mishap rate.

AIRCRAFT FLIGHT-RELATED MISHAP—Any mishap in which there is intent for flight and no reportable damage to the DoD aircraft itself, but the mishap involves a fatality, reportable injury, or reportable property damage. A missile or UAV/UAS that is launched from a DoD aircraft, departs without damaging the aircraft, and is subsequently involved in a DoD mishap is reportable as a guided missile mishap or UAV/UAS, respectively.

AIR FORCE LAUNCH—Any space launch operation conducted with significant oversight or insight by the Air Force and not subject to licensing requirements of 14 CFR Part 415. The Air Force may or may not be the space system owner.

AIR FORCE AT LARGE—Used for recording losses. Mishaps involving exchange students, military members in a non-pay status while waiting for appellate review if they have no written or verbal orders to

return to an Air Force installation, prior service personnel on leave before reporting to initial permanent duty assignment, etc., are recorded to the Air Force at large. Also used for recording losses of non-accepted Air Force aerospace vehicles (paragraph **4.9.2.**), engine-confined non-FOD mishaps (paragraph **1.6.1**), and aerospace vehicles leased to a non-DoD organization for modification, maintenance, repair, test, contract training, or experimental ground mishaps and includes non-Air Force personnel when Air Force property or equipment fires cause injury.

AIR RESERVE COMPONENTS (ARC)—All units, organizations, and members of the ANG and AFRC on active duty, on active duty for training, or in drill status, and ANG and AFRC technicians; include ANG and AFRC property and equipment.

AIRFIELD OPERATIONS PERSONNEL—Air traffic control (ATC) and airfield management (AM) personnel.

AVIATION MISHAP—An Air Force mishap involving a DoD aircraft or DoD UAV/UAS.

BROKEN ARROW—A reporting flagword that identifies a nuclear weapon accident that meets the following criteria: nuclear detonation of a nuclear weapon; nonnuclear detonation (no nuclear yield) or burning of a nuclear weapon, nuclear warhead, or nuclear component; radioactive contamination from a nuclear weapon or nuclear component; jettison of a nuclear weapon or nuclear component; public hazard (actual or perceived) from a nuclear weapon, nuclear warhead, or nuclear component.

CAUSAL FINDING—Causal findings are those, which, singly or in combination with other causal findings, logically result in damage or injury. They are identified with the word "CAUSE" at the start of the text of the finding.

CAUSE—A cause is a deficiency, which if corrected, eliminated, or avoided, would likely have prevented or mitigated the mishap damage or significant injury.

CHEMICAL AGENTS—A chemical compound intended for use in military operations to kill, seriously injure, or incapacitate persons through its chemical properties. Excluded are riot control agents, chemical herbicides, smoke, and flame producing devices. Pesticides, insecticides, and industrial chemicals, unless selected by the D0D Components for chemical warfare purposes, are also excluded.

CHEMICAL AGENT MISHAP—Any unintentional or uncontrolled release of a chemical agent when: reportable damage to property from contamination or costs are incurred for decontamination; or individuals exhibit physiological symptoms of agent exposure; or the agent quantity released to the atmosphere is such that a serious potential for exposure is created by exceeding the applicable maximum allowable concentration-time levels for exposure of unprotected workers or the general population or property.

COMBAT TRAINING MISHAP—Mishaps involving property damage or reportable injury during participation in base exercises, combat simulated exercises, obstacle/confidence courses, and inspector general exercise that test combat capability.

COMPETENT MEDICAL AUTHORITY—Allopathic (MD), osteopathic (DO), and chiropractic practitioners, as well as podiatrists, optometrists, dentists, and clinical psychologists. The term competent medical authority includes these medical practitioners only to the extent of their operations within the scope of their practice as defined by state law and subject to regulation by the Secretary of Labor. Competent medical authority also includes nurse practitioners and physician assistants under supervision of licensed medical practitioners.

CONTRACTOR MISHAP—A mishap resulting from contractor operations that involves injury to DOD personnel and/or damage to DOD resources. **NOTE:** When determining if a contractor employee's injury or illness requires reporting for recordkeeping requirements under 29 CFR 1904 refer to **Chapter 1** of this instruction.

CONTROLLED MOVEMENT AREA (CMA)—As defined in Airfield Operation Instructions, any portion of the airfield requiring aircraft (including UAV/UAS), vehicles and pedestrians to obtain specific Air Traffic Control approval for access (normally via two-way radio contact with the control tower). Controlled Movement Areas include but are not limited to areas used for takeoff, landing and as required taxiing of aircraft. Note: This definition is used in lieu of "movement area" as defined in the FAA Pilot Controller Glossary, also called CMA.

CONVENING AUTHORITY—The individual who has the authority to order a safety investigation.

CRITICAL PROFILE—A mission profile exceeding system limitations based on system specifications or other program documentation.

DEPARTMENT OF DEFENSE AIRCRAFT—All manned weight-carrying devices supported in flight by buoyancy or dynamic action and are owned or leased by the DoD Components (including Reserve forces and National Guard) that are, as follows: operated and exclusively controlled or directed by a DoD Component; furnished by the Government, loaned, or on bailment to a non-DoD organization for modification, maintenance, repair, test, contractor training, or experimental project for a DoD Component, when the Government has assumed ground and flight risk. Includes aircraft under test by a DoD Component. (This includes aircraft furnished by a contractor or another Government Agency when operated by a DoD aircrew in official status and a DD Form 250, *Material Inspection and Receiving Report*, has been executed to certify that the Department of Defense has accepted the aircraft.) Excludes aircraft leased, on bailment, or loaned to contractors, commercial airlines, other Government Agencies, or foreign governments, when the lessee has assumed risk of loss. Excludes civil aircraft owned by civil operators and accomplishing contract air missions for the DoD Components. Excludes factory-new production aircraft until successful completion of the post-production acceptance flight (mishaps that involve such aircraft are reported as contractor mishaps). Excludes flying club aircraft or privately owned aircraft on DoD installations.

DEPARTMENT OF DEFENSE CIVILIAN PERSONNEL—DoD Civil Service System employees (including Reserve component military technicians (dual status), unless in a military duty status), non-dual status technicians, and non-appropriated fund employees. To avoid dual reporting this excludes military personnel working part-time; Corps of Engineers Civil Works employees; Youth or Student Assistance Program employees; foreign nationals employed by the DoD Components; and Army-Air Force Exchange Service employees. Foreign national employees fall into two categories: 1) Direct Hire – Under the direct hire system, the U.S. Forces are the legal employer of the foreign national and assumes responsibility for all administrative and management functions with foreign national employment; 2) Indirect Hire – The host government serves as the legal employer of U. S. Forces' foreign nationals. Although the host government is the official employer for the foreign national personnel, it grants operational control to the U. S. Forces for the day-to-day management of such personnel. See DoD 1400.25-M, Sub-Chapter 1231 for additional information.

DEPARTMENT OF DEFENSE MILITARY PERSONNEL—All US military personnel on active duty or Reserve status under the provisions of 10 U.S.C. (reference (m)). National Guard personnel under the provisions of 32 U.S.C. (reference (n)); Service Academy cadets; Reserve Officer Training Corps

cadets when engaged in directed training activities; foreign national military personnel assigned to the DoD Components.

DEPARTMENT OF THE AIR FORCE (DAF) CIVILIAN PERSONNEL—Includes Senior Executive Service (SES), general schedule (GS), wage board (WB), and NSPS employees, including ANG and AFRC technicians, unless in military duty status. Includes non-appropriated fund (NAF) employees who are not military personnel working part time. This includes Youth Opportunity Program (YOP) and Student Assistance Program employees. This includes foreign-national civilians employed by Air Force (Air Force Foreign Nationals (AFFN)). This includes Air Force responsibility for any compensation claims arising from employment injury. Air Force Foreign National employees fall into two categories (see **Department of Defense Civilian Personnel)**. Mishaps involving an AFFN employee who is a direct hire will be investigated and reported via AFSAS. Indirect hire employee mishaps will normally be investigated by the host nation however safety will work with the host nation to ensure violations or hazards that are indentified as causal are corrected.

DEPARTMENT OF THE AIR FORCE (DAF) MILITARY PERSONNEL—These are Air Force personnel on active duty with the Air Force or ANG and AFRC personnel on military duty status. Includes US Air Force Academy cadets, US Air Force Academy Preparatory School cadet candidates and Reserve Officer Training Corps (ROTC) cadets engaged in directed training activities. Includes members of other US military services serving on extended active duty with the Air Force or foreign-national military personnel assigned to the Air Force.

DESTROYED AIRCRAFT/UAV/UAS—Aircraft/UAV/UAS will be considered destroyed when the man-hours required to repair the aircraft/UAV/UAS exceed the maximum stated in the "major repair man-hours" column of TO 1-1-638, *Repair and Disposal of Aerospace Vehicles*. A damaged aircraft/UAV/UAS not repaired is not automatically a "destroyed" aircraft/UAV/UAS. The decision not to return a damaged aircraft/UAV/UAS to service is independent of the mishap class. When the aircraft/UAV/UAS will not be returned to service, classify the mishap damage according to the total estimated repair cost as if it had been returned to service. The SIB must submit detailed repair cost estimates through MAJCOM channels to AFSC/SEF for validation if an aircraft/UAV/UAS will not be returned to service but is not considered destroyed.

DIRECTED ENERGY—An umbrella term covering technologies that relate to the production of a beam of concentrated electromagnetic energy or atomic or subatomic particles.

DIRECTED ENERGY DEVICE—A system using directed energy primarily for a purpose other than as a weapon. Directed-energy devices may produce effects that could allow the device to be used as a weapon against certain threats; for example, laser rangefinders and designators used against sensors that are sensitive to light. In this instance, characterize the mishap as a Directed Energy Device since the primary purpose of the mishap object was NOT as a weapon.

DIRECTED ENERGY DEVICE MISHAP—A mishap involving a directed energy device. An example would be damage to an optical device by an aircraft laser range finder.

DIRECTED ENERGY MISHAP—A directed energy weapon mishap or a directed energy device mishap.

DIRECTED ENERGY WEAPON—A system using directed energy primarily as a direct means to deny, disrupt, damage or destroy enemy equipment, facilities, and personnel.

DIRECTED ENERGY WEAPON MISHAP—A mishap involving a directed energy weapon and/or unique directed energy weapon support equipment.

DISABILITY—See permanent partial disability or permanent total disability.

EJECTION ATTEMPT—Completion of the action by the aircrew to initiate the ejection system, regardless of the outcome. For single motion systems, this only requires pulling the handle. For dual motion systems, both raising the sidearm and squeezing the trigger must be accomplished.

EJECTION SYSTEM—A mechanical device designed to forcefully separate the crew from the aircraft and return them to the earth's surface. Examples are an ejection seat, and extraction system, or a crew module.

ENGINE-CONFINED (Added)—Applies when an aircraft or UAV/UAS turbine engine experiences reportable damage (Class C or higher) that is confined to the engine and integral engine components. Damage is considered confined to the engine if there is less than Class C damage external to the engine. If the total cost of all damage external to the engine is equal to or greater than the Class C damage cost threshold, then the mishap is not engine-confined, regardless of the comparative extent of engine damage cost.

ENGINE-CONFINED FOD MISHAP (Added)—A mishap in which an aircraft or UAV/UAS turbine engine experiences reportable foreign object damage (Class C or higher) that is confined to the engine and integral engine components. Damage is considered FOD if it is caused by inanimate objects external to the engine (i.e. rocks, tools, safety wire, ice, etc.). Damage is considered confined to the engine if there is less than Class C damage external to the engine. If the total cost of all damage external to the engine is equal to or greater than the Class C damage cost threshold, then the mishap is not engine-confined, regardless of the comparative extent of engine damage cost.

EVENT—An unplanned occurrence, or series of occurrences, that does not meet the reporting criteria of a mishap.

EXPLOSIVES—All items of ammunition; propellants (solid and liquid); pyrotechnics; explosives; warheads; explosive devices; and chemical agent substances and associated components presenting real or potential hazards to life, property, or the environment. Excluded are wholly inert items and nuclear warheads and associated devices, except for considerations of storage and stowage compatibility; and for considerations of blast, fire, and non-nuclear fragment hazards associated with the explosives.

EXPLOSIVES AND CHEMICAL AGENTS MISHAP—An Air Force mishap involving an explosive or chemical agent.

EXPLOSIVES MISHAP—Mishaps resulting in damage or injury from: an explosion or functioning of explosive materials or devices (except as a result of enemy action); inadvertent actuation, jettisoning, and releasing or launching explosive devices; impacts of ordnance off-range.

FAA LICENSED LAUNCH—Any commercial launch that is not indemnified by the government and has been issued a license by FAA/AST.

FATAL INJURY—(Class A) — Injuries resulting in death, either in the mishap or at a later time, to include within 30 days subsequent to being medically discharged, retired, or separated from the service, due to complications arising from mishap injuries.

FINDINGS—Findings are the conclusions of the safety investigator. They are statements, in chronological order, of each significant event or condition sustaining the sequence leading to the mishap.

FIRE RELATED MISHAP—A mishap with reportable damage to real property or equipment or reportable injury to Air Force personnel resulting from fire, but does not involve a DoD aircraft or DoD UAV/UAS weapon system, or explosives. Fire mishaps are categorized as industrial mishaps and includes non-Air Force personnel when Air Force property or equipment fires cause injury.

FIRST AID—Any initial one-time treatment and any follow-up visit for observation of minor scratches, cuts, burns, and splinters, etc., that does not ordinarily require medical care. Such one-time treatment and follow-up visit for observation is considered first aid, even though provided by a physician or medical professional. The following information describes those cases that would be considered first aid. Treatment outside this finite list is considered medical treatment greater than first aid:

- Using a non-prescription medication at non-prescription strength (for medications available in both prescription and non-prescription form, a recommendation by a physician or other licensed health care professional to use a non-prescription medication at prescription strength is considered medical treatment);
- Administering tetanus immunizations (other immunizations, such as Hepatitis B vaccine or rabies vaccine, are considered medical treatment);
- Cleaning, flushing or soaking wounds on the surface of the skin;
- Using wound coverings such as bandages, Band-Aids™, gauze pads, etc.; or using butterfly bandages or Steri-Strips™ (other wound closing devices such as sutures, staples, etc., are considered medical treatment);
- Using hot or cold therapy;
- Using any non-rigid means of support, such as elastic bandages, wraps, non-rigid back belts, etc. (devices with rigid stays or other systems designed to immobilize parts of the body are considered medical treatment);
- Using temporary immobilization devices while transporting an accident victim (*e.g.*, splints, slings, neck collars, back boards, etc.).
- Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister;
- Using eye patches;
- Removing foreign bodies from the eye using only irrigation or a cotton swab;
- Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means;
- Using finger guards;
- Using massages (physical therapy or chiropractic treatment are considered medical treatment); or
- Drinking fluids for relief of heat stress.

NOTE: See 29 CFR 1904, *Recording and Reporting Occupational Injuries and Illness,* for further guidance for injury and illness classifications.

FRIENDLY FIRE—A circumstance in which members of a US or friendly military force are mistakenly or accidentally killed or injured in action by US or friendly forces actively engaged with an enemy or who are directing fire at a hostile force or what is thought to be a hostile force.

GOVERNMENT MOTOR VEHICLE (GMV)—A motor vehicle that is owned, leased, or rented by a DOD Component (not individuals). Examples of GMVs are passenger cars, station wagons, sport utility vehicles, vans, ambulances, buses, motorcycles, trucks, tractor-trailers, rental vehicles authorized by official travel orders, construction tracked vehicles, forklifts, road graders, agricultural-type wheeled tractors, and aircraft tugs. Includes military combat/tactical vehicles; e.g., tanks, self-propelled weapons, armored personnel carriers, amphibious vehicles ashore, HMMWV, and off-highway motorcycles and General Service Administration (GSA) vehicles leased on a long- or short-term basis. Vehicles on receipt to, and operated by, non-DOD persons or agencies and activities such as the US Postal Service or the American Red Cross are not GMVs.

GOVERNMENT MOTOR VEHICLE (GMV) MISHAP—A motor vehicle mishap involving the operation of a GMV as defined in this instruction.

GROUND AND INDUSTRIAL MISHAP—An Air Force mishap that occurs to on-duty DoD civilian and on- or off-duty DoD military personnel and does not meet the mishap category definition of nuclear, space, aviation, guided missile, explosives and chemical agents, directed energy, afloat, or motor vehicle as defined by this instruction. NOTE: A mishap involving both on- and off-duty military personnel is considered to be an on-duty mishap. This category also includes old ground mishaps categories such as Fire, Combat Training, Contractor, and Natural Phenomena were replaced with questions in AFSAS.

GROUND MISHAP—For the purposes of this instruction, a mishap that falls into one of the following mishap categories: afloat, or motor vehicle, or ground and industrial. NOTE: A ground mishap may involve materiel/equipment that is not traditionally thought of as happening on the ground (e.g., an off-duty military person flying a private plane). Former category Off-Duty Military and sub-categories of fire, combat training, physical and athletic conditioning, contractor, and natural phenomena have been replaced with questions in AFSAS. Damage to public or private property or injury or illness to non-DoD personnel caused by DoD operations are ground mishaps.

GUIDED MISSILE—All missiles propelled through air or water that are unmanned, guided by internal or external systems, and self-propelled. This term includes individual major missile components such as stages, guidance and control sections, payloads other than nuclear reentry vehicles; system equipment required to place the missile in an operational status while at the launch or launch control facility or on the launching aircraft; and system equipment required to launch and control the missile. Examples are intercontinental ballistic missiles; surface-to-air, air-to-air, and air-to-surface guided missiles, and torpedoes. This term includes all missiles that are: owned in whole or in part by a DoD Component; operationally controlled by a DoD Component; on bailment or loan to a non-DoD Agency for modification, testing, or as an experimental project for a DoD Component; under test by a DoD Component.

GUIDED MISSILE MISHAP—An Air Force mishap involving guided missiles or unique missile support equipment. Missiles that are unintentionally damaged or destroyed after launch from an aircraft but cause no aircraft damage, will be classified as a guided missile mishap.

HAZARD—Any real or potential condition that can cause injury or occupational illness to personnel; damage to or loss of a system, equipment or property; or damage to the environment.

HIGH ACCIDENT POTENTIAL (HAP) EVENT—Any hazardous occurrence that has a high potential for becoming a mishap that does not fit the definition of a HATR.

IN-FLIGHT SHUTDOWN (IFSD)—Any engine shutdown in-flight, either due to an engine malfunction or by the aircrew following flight manual procedures.

ILLNESS AND/OR DISEASE—A non-traumatic physiological harm or loss of capacity produced by systemic, continued, or repeated stress or strain; exposure to toxins, poisons, fumes, etc., or other continued and repeated exposures to conditions of the environment over a long period of time. For practical purposes, an occupational illness and/or disease is any reported condition that does not meet the definition of injury.

INDUSTRIAL MISHAP—A ground and industrial mishap that occurs in the work environment that does not meet the mishap subcategory definition of sport and recreational or miscellaneous as defined by this instruction. Also includes categories fire, combat training, Contractor, and Natural Phenomena. (The work environment, as defined in 29 CFR 1904.5, is "The establishment and other locations where one or more Air Force employees are working or are present as a condition of their employment; this would include those areas or locations where persons are TDY for training purposes. The work environment includes not only physical locations, but also the equipment or materials used by the employee during the course of his or her work).

INJURY—A traumatic wound or other condition of the body caused by external force or deprivation (fractures, lacerations, sprains, dislocations, concussions, compressions, drowning, suffocation, exposure, cold injury, and dehydration), including stress or strain, which results from an unplanned event. The injury is identifiable as to the time and place of occurrence and member or function of the body affected, and is caused by a specific event or incident or series of events or incidents in a single day or work shift.

INTENT FOR FLIGHT—Intent for flight is considered to exist when aircraft brakes are released and/or takeoff power is applied for commencing an authorized flight. Intent for flight continues until either the fixed-wing aircraft taxies clear of the runway or, for helicopters and/or vertical takeoff and landing aircraft, the aircraft has alighted and the aircraft weight is supported by the landing gear. Clear of the runway means the entire aircraft is physically off the active runway. Hover taxi is considered flight. With unmanned systems, intent for flight begins when a command link is established for the purpose of controlling an unmanned vehicle.

JOINT SERVICE MISHAP—A single mishap involving two or more Services in which one or more Services experiences reportable injuries or damages.

LAUNCH MISHAP—Space mishaps occurring during launch vehicle operations, including upper stages. This includes payloads that do not obtain orbit and range safety system failures.

LAUNCH OPERATOR—A person or entity who conducts or proposes to conduct the launch of a launch vehicle. AFSPC often refers to a launch operator as one of its range users.

LOST TIME CASE—(Class C)—Any injury or occupational illness or disease that causes loss of one or more days away from work beyond the day or shift it occurred. When determining if the mishap is a Lost Time Case, you must count the number of days the employee was unable to work as a result of the injury or illness, regardless of whether or not the person was scheduled to work on those days. Weekend days, holidays, vacation days, or other days off are included in the total number of day's loss, if the employee would not have been able to work on those days. Don't count the day of the injury/illness or the day the individual returns to work. **NOTE:** Occurrences that result from voluntary participation in wellness and fitness programs, or recreational activities such as exercise class, racquetball, or baseball or injuries or illnesses resulting from an employee eating, drinking, or preparing food for personnel consumption will be reported to comply with Department of Defense mandates.

MAJCOM—The term "MAJCOM " as used in this instruction includes ANG, DRUs, and FOAs.

MISCELLANEOUS MISHAP—A ground and industrial mishap that is on- or off-duty and does not fit into the industrial or sport and recreational subcategory. Also included in this subcategory are reportable mishaps occurring while using a commercial carrier such as a commercial bus, airplane, or taxicab.

MISHAP—A mishap is an unplanned occurrence, or series of occurrences, that results in damage or injury and meets Class A, B, C, D and Class E event reporting criteria IAW paragraph **1.10.** Damage or injury includes: damage to DoD property (excluding normal wear and tear or aging); occupational illness to DoD military or civilian personnel; injury to DoD military personnel on- or off-duty; injury to on-duty DoD civilian personnel; damage to public or private property, or injury or illness to non-DoD personnel caused by Air Force operations.

MISHAP COSTS—Mishap costs consist of two parts: Direct mishap costs ONLY include property damage costs (DOD and Non-DOD) and environmental cleanup costs. Injury and illness costs are part of the TOTAL mishap costs and are automatically calculated in AFSAS.

MISSILE SUPPORT EQUIPMENT (MSE)—Any component of ground launched missile systems used to handle or transport missiles or missile components. MSE includes, but is not limited to, system unique vehicles, such as, payload transporters, transporter-erectors, and all equipment below grade in the launch facility.

MISSION CAPABILITY—This term encompasses the purpose and functions of the space system (sensors, transponders, etc.) throughout its intended system mean mission duration (the expected life of the spacecraft).

MOTOR VEHICLE MISHAP—An Air Force mishap involving the operation of a motorized land vehicle operated by Air Force personnel. An Air Force mishap involving the operation of a DOD-owned or leased motorized land vehicle by non-Air Force personnel while operationally controlled by a DOD component. Fatalities or injuries to pedestrians or bicyclists involving moving motor vehicles are included in this category. This category does not include ground and industrial mishaps such as injuries occurring while loading or unloading, mounting or dismounting a non-moving vehicle; cargo damaged by weather; damage to a properly parked DOD vehicle, unless caused by an operating DOD vehicle. Additionally, damage to an Air Force vehicle caused by objects thrown or propelled into it by weather or natural phenomena, or by fire when no collision occurred; or damage to an Air Force vehicle when it is being handled as cargo and not operating under its own power and is properly parked, are not categorized as motor vehicle mishaps. Motor vehicle mishaps are divided into the following subcategories: Government Motor Vehicle (GMV) and Private Motor Vehicle (PMV).

NATURAL PHENOMENA RELATED—Injury to persons or damage to DoD property resulting from wildlife or environmental conditions of such a magnitude that they could not have been predicted or prepared for or for which all reasonable preparations had been taken. Do not report incidents that are natural phenomena related where adequate preparation, forecasting, and communication actions were taken and there were no injuries. However, report military and civilian injuries resulting from these mishaps as ground and industrial mishaps. NOTE. Natural phenomena mishaps are categorized as industrial mishaps.

NO LOST TIME CASE—(Class D)— Any on-duty injury or occupational illness or disease that restricts work activities and does not meet the definition of **Lost Time**. These are cases where, because of injury or occupational illness or disease, Air Force personnel only work partial days, restricted work or were transferred to another job, required medical treatment greater than first aid, loss of consciousness, Contaminated needle sticks/sharps, or a significant injury or illness/disease diagnosed by a physician or

other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment greater then first aid, or loss of consciousness. **NOTE:** Occurrences that result from voluntary participation in wellness and fitness programs, or recreational activities such as exercise class, racquetball, or baseball or injuries or illnesses resulting from an employee eating, drinking, or preparing food for personnel consumption will be reported to comply with Department of Defense mandates. Off-duty Class D injuries do not require reporting in AFSAS.

NON-ACCEPTED EQUIPMENT/VEHICLES—Non-delivered equipment/vehicles for which the Government has assumed responsibility; DD Form 250, *Material Inspection and Receiving Report,* HAS NOT been executed.

NON-DAF CIVILIAN PERSONNEL—Persons employed by host-nation agencies, and doing work such as public works or general engineering on Air Force installations, are not Air Force employees. Their employer is the host-nation agency paying them, supervising them, and handling employee benefits. Indirect-hire employees are not the same persons as DAF civilian employees when a host government has supervisory control. This includes the host government's responsibility for insurance, compensation costs, and the like.

NON-RECOVERABLE IN-FLIGHT SHUTDOWN—Any engine shutdown in-flight, either due to an engine malfunction or by the aircrew following flight manual procedures whereby: the engine is unable to restart, or further investigation determines that a restart attempt would not have been successful, or further investigation determines that continued operation would have caused the engine to fail, or the aircraft cannot maintain level flight at a safe altitude as determined by the situation.

NONFATAL CASES WITHOUT LOST WORKDAYS – Deleted

NUCFLASH—Includes accidental, unauthorized, or unexplained occurrences that could create the risk of war meeting any of the following criteria: accidental, unauthorized, or unexplained actual or possible nuclear detonation by US forces or US-supported allied forces; accidental or unauthorized launch of a nuclear-armed or nuclear-capable missile by US forces or US-supported allied forces; unauthorized flight or deviation from an approved flight plan by a nuclear-armed or nuclear-capable aircraft of US forces or US-supported allied forces that could be perceived as a hostile act.

NUCLEAR CAPABLE UNIT—A unit or an activity assigned responsibilities for employing, assembling, maintaining, transporting, or storing war reserve nuclear weapons, their associated components and ancillary equipment.

NUCLEAR MISHAP—An Air Force mishap involving radioactive material.

NUCLEAR WEAPON—A complete assembly, in its intended ultimate configuration which, upon completion of the prescribed arming, fusing, and firing sequence, is capable of producing the intended nuclear reaction and release of energy. For the purpose of mishap categorization, also include unique support equipment associated with nuclear weapons.

NUCLEAR WEAPON COMPONENTS—Weapon components composed of fissionable or fissionable materials that contribute substantially to nuclear energy release during detonation.

NUCLEAR WEAPON MISHAP—A mishap that involves destruction of, or serious damage to, nuclear weapons, nuclear weapons systems, or nuclear weapons components resulting in an actual or potential threat to national security or life and property. Reportable nuclear surety violations and damage to support equipment unique to a nuclear weapon system will be reported under this subcategory.

NUCLEAR WEAPONS SURETY—Materiel, personnel, and procedures which contribute to the security, safety, and reliability of nuclear weapons and to the assurance that there will be no nuclear weapons mishaps, incidents, unauthorized weapon detonations, or degradation performance at the target.

NUCLEAR WEAPON SYSTEM—A combat delivery vehicle with its nuclear weapon or weapons and associated support equipment, non-combat delivery vehicles, facilities, and services.

OBSERVATION AND/OR DIAGNOSTIC PROCEDURE—Hospitalization or restriction from assigned work activities for observation or diagnosis is not a "lost time case," "no lost time case," or "first aid case" provided no treatment or medication is given for the suspected injury or occupational illness, and competent medical authority determines the individual could have returned to his or her normal job without impairment or disability. This classification applies also where an individual is temporarily restricted from regularly assigned duties to prevent exceeding time-weighted exposure limits. This is not reportable if a competent medical authority provides no treatment or medication for the suspected injury or occupational illness or finds the person could have returned to normal assigned duties without impairment or disability.

OCCUPATIONAL ILLNESS—Any reported condition that does not meet the definition of injury. Any abnormal physical condition or disorder, other than one resulting from an occupational injury, resulting in adverse consequences and caused by occupational factors associated with employment. Includes all confirmed cases of acute and chronic illnesses or diseases caused by inhalation, absorption, ingestion or direct contact with suspect substances.

OFF-DUTY—DoD personnel are off-duty when they are not on-duty (see on-duty definition). Personnel participating in base team sporting activities or in a permissive temporary duty (TDY) status are off-duty. Reserve and National Guard personnel performing inactive duty training (drill) will be considered off-duty: when traveling to or from the place at which such duty is performed; or while remaining overnight, immediately before the commencement of inactive-duty training; or while remaining overnight between successive periods of inactive-duty training, at or in the vicinity of the site of the inactive-duty training, if the site of the inactive-duty training is outside reasonable commuting distance of the member's residence. NOTE: This definition is for mishap reporting purposes only and has no relation to compensability or line-of-duty determination. Personnel driving their private motor vehicle prior to or after their duty day are considered off-duty for mishap reporting purposes.

OFF-DUTY MILITARY RELATED—A fatality or injury to off-duty DoD military personnel whether or not on a DoD installation, excluding private motor vehicle (PMV) mishaps. NOTE: A mishap involving both on- and off-duty military personnel in the same mishap will be categorized as an on-duty mishap.

ON-DUTY—DoD personnel are on-duty when: Physically present at any location where they are to perform their officially assigned work. Officially assigned work includes organization-sponsored events an employee is permitted to attend, regardless of location. This includes those activities incident to normal work activities that occur on DoD installations, such as lunch, coffee, or rest breaks, and all activities aboard military vessels. NOTE: Personnel walking to and from work place parking areas at the start and end of the duty day are in an on-duty status. Personnel who eat lunch and then deviate from normal lunch activities (example shopping) are considered off-duty. Being transported by DoD or commercial conveyance to perform officially assigned work. (This includes travel in PMVs or commercial conveyances while performing official duty, but not routine travel to and from work).

On temporary duty, personnel on assignment away from the regular place of employment are covered 24 hours a day for any injury or occupational illness that results from activities essential or incidental to the temporary assignment. Essential or incidental activities include travel between places of business or lodging and eating establishments, drugstores, barbershops, places of worship, cleaning establishments, bowling centers, officer and enlisted clubs, gymnasiums, and similar on-base non-appropriated fund (NAF) facilities and similar places required for the health or comfort of the member, are considered on-duty. However, when personnel deviate from the normal incidents of the trip and become involved in activities, personal or otherwise, that are not reasonably incidental to the duties of the temporary assignment contemplated by the employer, the person ceases to be considered on-duty for investigation and reporting purposes of injuries or occupational illnesses. Injuries or occupational illnesses to personnel resulting from activities unrelated to the temporary duty assignment or non-commander directed sports and recreation activities (e.g. jogging, golfing, basketball) will be reported as off-duty mishaps.

Taking part in compulsory physical fitness training, sporting events, and physical fitness evaluation activities (including cycle ergometric testing when permitted). On-duty compulsory fitness training and activities include directed sports activities at professional military education (PME) and formal training courses such as Basic Military Training, Technical Training Schools, Airman Leadership School, Squadron Officer School, and the Air Force Academy. These activities are considered on-duty when a superior directs participation at a specific location and time. This includes supervision directed physical conditioning activities when a mandatory location and time are designated. Air Force civilian employees authorized to participate in physical fitness activities during normal duty hours are also on-duty.

Military members working part-time Non-appropriated Fund (NAF) positions. NOTE: Use the NAF position series instead of the military Air Force Specialty Code (AFSC) for safety reporting

NOTE: The definitions above are for mishap reporting purposes only and are not related to compensability or line-of-duty determination.

ORBIT MISHAP—Space mishaps occurring during spacecraft operation after separation from all launch vehicle components, including upper stages and transfer motors.

PERMANENT PARTIAL DISABILITY—(Class B) An injury or occupational illness that does not result in death or permanent total disability, but in the opinion of competent medical authority, results in permanent impairment through loss or loss of use of any part of the body. EXCEPTIONS: Loss of teeth, fingernails, toenails; loss of fingertips or toe tips without bone involvement; repairable inguinal hernia; disfigurement; sprains or strains that do not cause permanent limitation of motion.

PERMANENT TOTAL DISABILITY—(Class A) Any nonfatal injury or occupational illness that, in the opinion of competent medical authority, permanently and totally incapacitates a person to the extent that he or she cannot follow any gainful occupation and results in a medical discharge, retirement, separation. The loss, or the loss of use of both hands, both feet, both eyes, or a combination of any of those body parts as a result of a single mishap will be considered as a permanent total disability. For purposes of this instruction, any mishap resulting in injury severe enough for an individual to be in a non-medically induced coma is a permanent total disability. (NOTE: Upgrade injury to a fatal mishap if death occurs within 30 days of medical discharge, retirement, or separation from service due to complications arising from the mishap injury).

PHYSICAL AND ATHLETIC CONDITIONING MISHAP— Deleted

PRE-LAUNCH MISHAP—Space mishaps occurring during ground handling, processing, and transportation operations.

PREEXISTING INJURY OR ILLNESS—An injury or illness is a preexisting condition if it resulted solely from a non-work-related event or exposure that occurred outside the work environment.

PRIVATE MOTOR VEHICLE (PMV)—A non-commercial vehicle that is neither a GMV nor GVO. A vehicle normally registered for highway use.

PRIVATE MOTOR VEHICLE (PMV) MISHAP—A motor vehicle mishap, regardless of the identity of the operator, that does not involve a GMV or GVO, but results in a fatality or lost time case injury (involving days away from work) to military personnel on- or off-duty or to on-duty civilian personnel, or reportable damage to DoD property. Fatalities and injuries to bicyclists and pedestrians in the traffic environment are included in this category.

PROPERTY DAMAGE—Damage to facilities, equipment, property, materiel, or resources. If the occurrence meets mishap reporting criteria, then the cost of environmental cleanup shall be included in property damage costs. NOTE: For mishap reporting purposes, inadvertent releases of ozone depleting substances are reported when they meet mishap reporting criteria.

RADIOLOGICAL MISHAP—See reactor and radiological mishap.

REACTOR AND RADIOLOGICAL MISHAP—Mishaps involving fissile material used in a self-supporting chain reaction (i.e., nuclear fission) to produce heat and/or radiation for both practical application and research and development.

REACTOR SYSTEM—A nuclear reactor with any associated nuclear or non-nuclear systems.

RECOMMENDATIONS—Recommendations are feasible and effective solutions to eliminate identified hazards, or if the hazard cannot be eliminated, to mitigate the hazard's potential consequences. Actions likely to prevent a similar mishap or reduce its effects.

RESTRICTED WORK—A physician or other licensed health care professional recommends that the employee not perform one or more of the routine functions of his or her job, or not work the full workday that he or she would otherwise have been scheduled to work

SAFETY INVESTIGATOR—An individual authorized and qualified to investigate a safety occurrence. Examples include members of an ISB or SIB, an SIO, and members of a safety staff.

SAFETY REPORT—Safety reports include message reports (preliminary, status, and final), formal reports, and injury and occupational illness forms and logs.

SIGNIFICANT INJURY or ILLNESS—Work related cases involving conditions such as cancer, chronic irreversible disease, a fractured or cracked bone, or a punctured eardrum, among others. Severity is determined by a competent medical authority.

SINGLE MANAGER—The single individual specifically designated, under the integrated weapon system management architecture, to be responsible for the life cycle management of a system or end-item. The Single Manager is the program manager vested with full authority, responsibility, and resources to execute and support an approved Air Force program. A list of the Single Manager organizations and MDSs is available at: **https://pml.wpafb.af.mil/BlueBook/**

SPACE ANOMALY—An on-orbit malfunction of a space system, or a deviation from what is consistent with normal operations, that does not meet the criteria of a mishap. An anomaly will be initially investigated using the anomaly resolution process.

SPACE BOOSTER—A space vehicle designed to propel or carry another space vehicle from the earth's surface or from orbit to a desired point and velocity in space. This term includes engines, rocket motors, upper stages, fuel tanks, and guidance and control sections.

SPACE COMMAND AND CONTROL SYSTEMS (SCCS)—Systems required to provide telemetry, tracking, commanding, mission data dissemination, data processing, communication and range support for space vehicles. SCCS examples include the common user Air Force Satellite Control Network (AFSCN) and other program-dedicated networks.

SPACE MISHAP—An Air Force mishap involving a space system and/or unique space support equipment.

SPACE SYSTEMS—Any system used for space operations or support. Space system is a generic term used to encompass all ground, space and link segment systems and their components. This includes space vehicles, unique space support equipment, and space command and control systems.

SPACE VEHICLE—A vehicle designed to orbit or travel beyond the earth's atmosphere or a system designed to lift other space vehicles into orbit. Examples of space vehicles include boosters (launch vehicles), spacecraft (satellites, orbiters, payloads) and reusable spacecraft. Intercontinental Ballistic Missiles are not considered space vehicles.

SPACECRAFT—A space vehicle designed to operate in space and launched by a booster. The term includes satellites, orbiters and payloads and their associated subsystems.

SPORT AND RECREATION MISHAP—Mishaps involving injuries that occur during participation in some form of recreational or athletic activities whether on- or off-duty. The activity may be for leisure, designed to develop an Air Force member's physical ability or to maintain or increase individual/collective combat and/or peacekeeping skills (See TRAINING RELATED DEATH).

TECHNICAL EXPERT—An individual authorized and qualified to investigate a safety occurrence for a specific aircraft, system, or process for which he or she possesses unique knowledge or skills. Examples include government and contractor engineers, investigators, and equipment specialists.

TOXOID—A toxin that has been treated (commonly with formaldehyde) as to destroy its toxic property but that still retains its antigenicity, i.e., the toxin still has the capability of stimulating the production of antibodies and thus of producing an active immunity.

TRAINING RELATED DEATH—A death associated with a non-combat military exercise or training activity that is designed to develop a military member's physical ability or to maintain or increase individual/collective combat and/or peacekeeping skills, and is due to either a mishap or the result of natural causes occurring during or within one hour after any training activity where the exercise or activity could be a contributing factor. NOTE: The cause of death must be attributed to the mandatory physical exercise as determined by a competent medical authority.

UNIQUE SPACE SUPPORT EQUIPMENT (SSE)—Systems, equipment and facilities required for processing, handling or transporting space systems and their components. SSE examples include space-unique support vehicles, payload or launch vehicle ground transporters, vehicle assembly equipment, launch pad facility and its associated equipment, equipment required for test and checkout, and equipment for space system recovery. Components or equipment commonly used in non-space applications, and not specifically configured for space related use, are not considered SSE.

UNMANNED AERIAL SYSTEM (UAS)—The system whose components include the necessary equipment, network, and personnel to control an unmanned aerial vehicle as defined below.

UNMANNED AERIAL VEHICLE (UAV)—All unmanned DoD weight-carrying devices supported in flight by buoyancy or dynamic action and are owned or leased by the DoD Components, including aerostat balloons, that are, as follows: operated and exclusively controlled or directed by a DoD Component; furnished by the Government or on bailment to a non-DoD organization for modification, maintenance, repair, test, contract training, or experimental project for a DoD Component, when the Government has assumed ground and flight risk; under test by a DoD Component. (This includes UAVs furnished by a contractor or another Government Agency when operated by a DoD crew in official status and a *DD Form 250, Material Inspection and Receiving Report*, has been executed to certify that the DoD has accepted the vehicle.) UAVs covered by this instruction include, but are not limited to, the following: Tactical UAVs, such as the RQ-1 Predator or RQ-4 Global Hawk; Full Scale Aerial Target Remotely Piloted Vehicles (FSAT RPVs), such as the QF-4; Subscale RPVs, such as the BQM-34 Firebee or MQM-107 Streaker; Buoyant UAVs, such as a tethered aerostat; Remotely Operated Aircraft (ROA), and Unmanned Combat Aerial Vehicles (UCAV). When an FSAT RPV is carrying a person, it is a DoD aircraft, not a UAV.

UNMANNED AERIAL VEHICLE MISHAP—Any mishap involving a DoD UAV/UAS as defined in this instruction, but not involving a DoD aircraft. Damage to a DoD UAV/UAS, when it is being handled as a commodity or cargo, is a ground and industrial, industrial aviation mishap. See AFI 99-151, *Air-Launched Missile Analysis Group (ALMAG)*, for additional guidance on investigating specific types of air-launched missile anomalies and failures.

WEAPONS MISHAP—For the purposes of this instruction, a mishap that falls into one of the following mishap categories: nuclear, guided missile, explosives and chemical agents, or directed energy. NOTE: A weapons mishap may involve materiel/equipment that is not traditionally thought of as a weapon (e.g., fissile material used in a self-supporting chain reaction to produce heat for practical application).

WORK ENVIRONMENT—The establishment and other locations where one or more employees are working or are present as a condition of their employment. The work environment includes not only physical locations, but also the equipment or materials used by the employee during the course of his or her work.

WORK-RELATEDNESS—An injury or illness is work-related if an event or exposure in the work environment either caused or contributed to the resulting condition or significantly aggravated a pre-existing injury or illness. Work-relatedness is presumed for injuries and illnesses resulting from events or exposures occurring in the work environment, unless an exception in 29 CFR 1904.5(b)(2) specifically applies.

Attachment 2

ORGANIZATION CONTACT INFORMATION

A2.1. Contact Information within AFSC. AFSC/JA (Staff Judge Advocate)

9700 G Avenue SE

Kirtland AFB NM 87117-5670

DSN 246-0626/1193 or (505) 846-0626/1193

FAX DSN 263-5798 or (505) 853-5798

AFSC/SEH (Human Factors)

9700 G Avenue SE

Kirtland AFB NM 87117-5670

DSN 263-4868 or (505) 853-4868

DSN 246-0880/3763/0853 or (505) 846-0880/3763/0853

AFSC Technical Assistance

DSN 246-5867 or (505)-846-5867

After hours contact the Kirtland AFB Command Post at DSN 246-3776/6395 or (505)-846-3776/6395, and ask for the AFSC Technical Assistance Duty Officer.

Alternatively, call the Kirtland AFB operator at 877-809-6989 (toll free), ask to be connected to the Command Post and then ask for the AFSC Technical Assistance Duty Officer.

A2.2. Contact Information outside AFSC.

AFIP

Armed Forces Institute of Pathology (not to be used for shipping specimens)

AFIP/DAFME, AFIP Annex

1413 Research Blvd, Bldg 102

Rockville, MD 20850

http://www.afip.org/consultation/AFMES/

DSN 285-0000 or (301) 319-0000

AFLOA/JACC

DSN 426-9055 or (703) 696-9055

FAX DSN 426-9009 or (703) 696-9009

afloa.jacc@pentagon.af.mil

Air Force Nuclear Center (NWC)

1551 Wyoming Blvd SE

Kirtland AFB, NM 87117

DSN 246-6567 or (505) 846-6567

http://www.nwc.kirtland.af.mil/

Defense Contract Management Agency (DCMA)

HA SCMA Aircraft Operations

6350 Walker Lane, Suite 300

Alexandria, VA 22310

DSN 328-1309 or (703) 428-1309

Defense Threat Reduction Agency NSO (DTRA)

1680 Texas St SE

Kirtland AFB, NM 87118

(505) 846-8436

FAA (FAA Combined Operations Center)

(202) 267-3333

SAF/FMC (Air Force Cost Analysis Agency)

http://www.e-publishing.af.mil/, AFI 65-503, Table A10-1

DSN 222-6001 or (703) 692-6001

DSN 224-0453

HQ AFCA/GCG (Hammer ACE)

82 CSS/SCMH (Hammer Ace)

34 Elm St., Bldg 19

Langley AFB, VA 23665

https://hammerace.acc.af.mil

DSN 575-5785 or (757) 335-5785. After hours contact Langley AFB Command Post DSN 574-5411 or (757) 764-5411

Military Surface Deployment and Distribution Command (SDDC)

709 Ward Drive, Bldg 1990, ATTN: SDDC-SA

Scott AFB, IL 62225

Organizational email address: **sddc.safety@sddc.army.mil**

DSN 770-5035 or (618) 220-5035

Military Surface Deployment and Distribution Command (SDDC) Defense Transportation Tracking System (DTTS) Program Office Hot-line: 1-800-826-0794

Military Surface Deployment and Distribution Command (SDDC) Operations Center Hotline: Commercial: 757 878-7555/8141 or DSN: 826-7555/8141.

Military Traffic Management Command

Movement Control Center

DSN 826-8220 or (757) 878-8220

OSHA

24-hour toll-free hot line 1-800-321-OSHA (1-800-321-6742)

Attachment 3

PRIVILEGED SAFETY INFORMATION

Figure A3.1. Privilege Warning Statement (Mandatory for all media containing privileged information)

FOR OFFICIAL USE ONLY.

This contains privileged, limited-use safety information. Unauthorized use or disclosure can subject you to criminal prosecution, termination of employment, civil liability, or other adverse actions. See AFI 91-204, **Chapter 3** for restrictions. Destroy in accordance with AFMAN 33-360 when no longer needed for mishap prevention purposes

Figure A3.2. Safety Investigation Non-Disclosure Agreement.

Safety Investigation Non-Disclosure Agreement

(Date)

1. Protection of privileged safety information acquired during safety investigations of Air Force mishaps is important in order to prevent future mishaps. I am performing services in support of an Air Force safety investigation.

2. As a result I have access to privileged safety information. Access is solely for the purpose of mishap prevention and no other use of safety privileged information by me or my sponsoring organization (company or military organization) is authorized access to this information. I understand I am not to make copies (typed, photo, etc) of any information or disseminate any information to anyone or organization not directly providing services to the safety investigation. I am expressly prohibited from providing any privileged safety investigation information to my general counsel's office, legal staff, or any personnel involved in litigation.

3. After I am finished with any information provided on any media, I am required to return it to Air Force safety channels. Retaining copies is not authorized. I am not to discuss privileged safety information with anyone other than personnel directly involved with the Air Force safety investigation.

4. I understand that information obtained through a safety investigation is considered official Air Force information.

5. I understand the above terms and agree to abide by the conditions set forth.

_____

Signature Block

Figure A3.3. Witness Promise of Confidentiality and Non-Disclosure Agreement

Witness Promise of Confidentiality and Non-Disclosure Agreement

(Date)

1. I, (Name of Witness), (Grade), (Organization), have been advised by (Name of Investigator), a safety investigator of the mishap that occurred on (Date of Mishap) involving an (aircraft/space vehicle/missile type) of the following:

a. This investigation is being conducted under the provisions of AFI 91-204 solely for the purpose of mishap prevention within the United States Air Force and to determine all factors relating to the mishap in order to prevent recurrence.

b. I understand I am providing statement(s) (written and/or verbal) for a safety investigation and I acknowledge that a promise of confidentiality has been extended to me.

c. I understand that my confidential statement(s) (written and/or verbal) will not be made public and it will only be used by authorized officials solely for mishap prevention purposes. Additionally, my confidential statement will not be used as evidence to support any claims, litigation, disciplinary action or any adverse administrative action such as a Flying Evaluation Board, line-of-duty status determination, pecuniary liability determination, or elimination from military service. I understand, however, that my statement can be released pursuant to a valid court order on behalf of the defendant in a criminal trial. I further understand that if my statement contains an intentional misrepresentation, then my statement will no longer be considered confidential and can be used to support disciplinary and/or administrative actions against myself and/or others.

d. Non-confidential witness statements may be released to the public pursuant to a Freedom of Information Act request. Only statements given under a promise of confidentiality are protected from release outside safety channels.

e. I understand that the chain of command will review the final mishap report, to include my confidential statement, but the chain of command may only use my statement for safety and mishap prevention purposes.

f. Witness statements (written and/or verbal) provided to non-safety investigators are not covered by a Promise of Confidentiality.

g. I understand that information obtained through a safety investigation is considered official Air Force information. Additionally, I understand all official Air Force information, relating to this mishap, is considered "close hold."

2. I understand the effect of this promise of confidentiality and I understand my statements (written or verbal), given under this promise of confidentiality, will be treated as privileged information.

_____

Witness Signature Block

Figure A3.4. Non-Privileged Witness Statement(s).

Non-Privileged Witness Statement

(Date)

1. I, (Name of Witness), (Grade), (Organization), have been advised by (Name of Investigator), a safety investigator of the mishap that occurred on (Date of Mishap) involving an (aircraft/space vehicle/missile type) of the following:

a. This investigation is being conducted under the provisions of AFI 91-204 solely for the purpose of mishap prevention within the United States Air Force and to determine all factors relating to the mishap in order to prevent recurrence. I understand I am being interviewed as a witness in a safety investigation and I acknowledge that a promise of confidentiality has not been extended to me.

b. My witness statements (written or verbal) may be utilized for any valid purpose and be released to any subsequent investigation of this mishap and may be released to the public pursuant to a Freedom of Information Act request.

_____

Witness Signature Block

Figure A3.5. Memorandum for Contractor Representatives Serving as Technical Experts to Safety Investigations.

MEMORANDUM FOR (Non-Air Force technical expert's name and company/organization)

FROM: (SIB President)

SUBJECT: Protection of USAF Privileged Safety Information

1. In response to my request for technical assistance, the Air Force and your employer have agreed that you will serve as a technical expert for the Safety Investigation Board (SIB) over which I preside. Unless you specifically identify information in any technical report you provide to the SIB as proprietary data or confidential analysis or opinion, it will be included in the releasable portion (Part 1) of the SIB's final report. If you want us to treat any part of your report as privileged information so we can protect it from disclosure outside the Department of Defense, you must specifically request such protection. In such case it will be included in the privileged portion (Part 2) of the formal safety report and will be used solely for mishap-prevention purposes.

2. The military safety privilege protects information provided under a promise of confidentiality and the deliberative process of the SIB. It enhances the SIB's ability to identify potential causes of mishaps quickly and accurately so we can prevent their recurrence. This process must have the highest degree of reliability to maintain combat readiness, national security, and public safety.

3. In accepting your appointment to serve as technical expert, you must also agree to safeguard our safety privilege. You may be given access to privileged information and you must not disclose to anyone, including your employer, any privileged information derived from our investigation. You will prepare only one copy of your technical report for the SIB. You will destroy or surrender to me any notes, documents, computer files, or other materials, produced or obtained during this investigation, if they contain privileged information. You must not make copies of any privileged documents (including analytical computer products, confidential tape recordings, and staged photographs) for use outside the proceedings of this board. You may not have a copy of Part 2 of the Board's final report or any part of a draft thereof. You must report to me (or, after the SIB is dissolved, to HQ Air Force Safety Center) any attempt by anyone, other than a SIB member or other duly authorized person, to obtain any confidential or deliberative information from you about this investigation.

4. Before beginning your service to this SIB, please sign and date the endorsement below. I will give you a copy of this memorandum.

(SIB President's signature block)

1st Endorsement

To:(SIB President)

I acknowledge understanding of the contents of this memorandum and receipt of a copy thereof, and I agree to comply with the duties and responsibilities stated therein.

(Technical expert's signature block)

(Date)

Figure A3.6. Notice to Witness Documenting Promise of Confidentiality of Recorded Statements.

"I am (name) investigating the mishap involving (aircraft/space vehicle/missile type) that occurred on (date). This investigation is being conducted under the provisions of AFI 91-204 solely for the purpose of mishap prevention and to determine all factors relating to the mishap in order to prevent recurrence. You are hereby advised that, as a witness to this investigation, your statement is confidential and will not be made public. Only authorized officials will use your statement for the sole purpose of mishap prevention. Your statement may not be used as evidence by the Government to support any disciplinary actions or adverse administrative actions, such as a Flying Evaluation Board, a determination of line-of-duty status or pecuniary liability, or elimination from military service. The only exceptions to this would be that your statement could be released pursuant to a valid court order on behalf of a defendant in a criminal trial. If you make an intentional misrepresentation, then your statement will no longer be considered confidential and can be used to support disciplinary and/or administrative actions against yourself or others. Further you are advised that the chain of command will review the final mishap report, to include your confidential statement, but the chain of command may only use your statement for safety and mishap prevention purposes."

Transcripts of complete interviews must contain this advisory. In cases where witness testimony is summarized by the interviewer, it must be clear that the witness was advised of and understood this advisory.

Figure A3.7. Notice to Witness that Recorded Statement is not Confidential.

"I am (Name of Investigator), a safety investigator of the mishap that occurred on (Date of Mishap) involving an (aircraft/space vehicle/missile type). This investigation is being conducted under the provisions of AFI 91-204 solely for the purpose of mishap prevention within the United States Air Force and to determine all factors relating to the mishap in order to prevent recurrence.

A promise of confidentiality is not being extended to you. Your statement can be released to any subsequent investigation of this mishap and may be released to the public pursuant to a Freedom of Information Act request."

Figure A3.8. Cover Sheet Documenting Promises of Confidentiality to Contractors.

(Name of contractor) requests the Air Force safety investigation board/single investigating officer investigating the mishap involving an (mishap vehicle) on (date of mishap) handle the attached report and any supplemental information provided by our technical experts confidentially.

(Contractor's signature block)

(Date)

I hereby extend (name of contractor) a promise of confidentiality for the attached report and any supplemental information provided by your technical experts.

(SIB member/SIOs name)

Attachment 4

INSTRUCTIONS FOR AF FORM 711D, NUCLEAR MISHAP/INCIDENT REPORT

A4.1. The AF Form 711D, is available at: http://www.e-publishing.af.mil/. Use the AF Form 711D to document a nuclear mishap or nuclear incident.

A4.1.1. Item 1. Materiel Involved.

A4.1.1.1. Item 1A. War reserve bomb, warhead, or component. For nuclear weapons, provide the standard nomenclature, modification number, and serial number for each weapon involved. If only a nuclear component is involved, provide the illustrated parts breakdown nomenclature, part number, and serial number of the item involved; the next major assembly to which the component is installed; and the nuclear weapon supported (such as, CF1504 Cable Assembly, Part Number 123456-01, Stock Number 1234, MC3681 Shape Component, B61).

A4.1.1.2. Item 1B. Training Items. Self-explanatory.

A4.1.1.3. Item 1C. Support, test, and handling equipment. For support, test, handling, and other nuclear safety certified equipment listed at **https://wwwmil.nwc.kirtland.af.mil/MNCL/** , give the national stock number, part number, serial number (if applicable), and manufacturer's name.

A4.1.1.4. Item 1D. Carrier. For an aircraft or missile, give the MDS and serial number. During aircraft and missile flights, give the mission identification number; for ground vehicles, give the nomenclature and serial number; and for reentry vehicles, give the Mark (MK) number and serial number.

A4.1.2. Item 2. Type of Operation. Check the box reflecting the operation in progress at the time of the mishap or its discovery. If "other" is checked, provide a full description of the operation in the block below "other." Check that block also.

A4.1.3. Item 3. Damage. Describe the damage to the item and provide photographs, if possible.

A4.1.4. Item 4. Nuclear Materiel Information.

A4.1.4.1. Item 4A. Type and extent of contamination, measured intensities, rate of decay, and decontamination procedures established. Separate this portion of the report into sections, and discuss each factor individually.

A4.1.4.2. Item 4B. Disposition of nuclear material involved. Indicate shipping destination or when it was disposed of (if unknown, so state), and give any other actions taken or planned.

A4.1.5. Item 5. Aircraft, Missile, or System Information. Describe the aircraft, missile, or system (as appropriate) configuration at the time of the mishap or its discovery. For aircraft weapon systems, include the position of all weapon-related switches.

A4.1.6. Item 6. Miscellaneous Information. Provide details if a fire occurred. Provide details if the nuclear weapon's high explosive detonated. Include information on any component for which a material deficiency report was submitted according to T.O. 00-35D-54 (include the report control number). Give the technical order number, title, date, pages, and step numbers if technical order noncompliance occurred.

A4.1.7. Item 7. Factors Related to the Mishap. Provide factors related to the mishap, and include the findings and causes discussed in paragraphs **5.9.** and **5.10.**

A4.1.8. Comments. Use this paragraph for comments on the accident or incident, and ensure the comments are other than those included in Item 11 of the AF Form 711B. Include immediate, intermediate, continuing, or long-range corrective actions and the "get well" date in Item 11 of the AF Form 711B. Give the status of individuals under the Personnel Reliability Program and the positions they occupy (critical or controlled).

Attachment 5

DEPARTMENT OF DEFENSE HUMAN FACTORS ANALYSIS AND CLASSIFICATION SYSTEM (DOD HFACS)

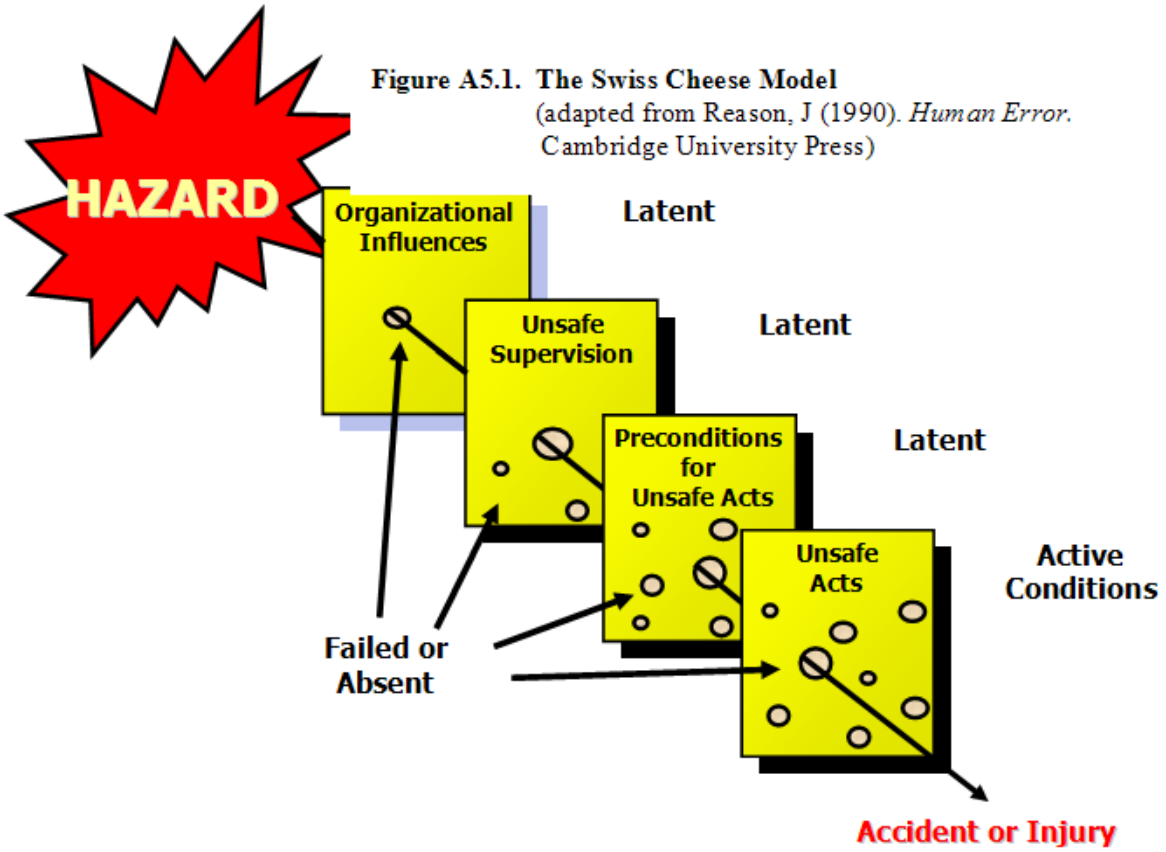
A5.1. Introduction. The information in this attachment rescinds and replaces the human factors taxonomy in Attachment 8 of AFPAM 91-211, "USAF Guide to Aviation Safety Investigation." This information applies to all safety disciplines. Department of Defense Human Factors Analysis and Classification System (DOD HFACS) implements portions of DoDI 6055.07, Accident Investigation, Reporting, and Record Keeping. The DODI directs DOD components to "Establish procedures to provide for the cross-feed of human error data using a common human error categorization system that involves human factors taxonomy accepted among the DoD Components and U.S. Coast Guard." All investigators who report and analyze DoD mishaps will use DOD HFACS. Human Factors is not just about humans. It is about how features of people's tools, tasks and working environment systemically influence human performance. This model is designed to present a systematic, multidimensional approach to error analysis.

A5.2. Purpose. A thorough mishap investigation is absolutely necessary to determine the cascading events causal to a mishap, and to recommend corrective actions to prevent recurrence. This guide provides the mishap investigator with a template that aids in organizing the investigation. Mishaps are rarely attributed to a single cause, or in most instances, even a single individual. The goal of a mishap or event investigation is to identify these failures and conditions in order to understand why the mishap occurred and how it might be prevented from happening again. This attachment is designed for use by all members of an investigation board in order to accurately capture the complex layers of human error in context with the individual and mishap or event.

A5.3. Description. As described by James Reason (1990), *active failures* are the actions or inactions of operators that are believed to cause the mishap. Traditionally referred to as "error," they are the last "acts" committed by individuals, often with immediate and tragic consequences. For example, an aviator forgetting to lower the landing gear before touch down will yield relatively immediate, and potentially grave, consequences. In contrast, *latent failures* or c*onditions* are errors that exist within the organization or in the chain of command that affect the sequence of events characteristic of a mishap. For example, it is not difficult to understand how tasking Security Forces crews or teams at the expense of quality rest can lead to fatigue and ultimately errors (active failures). Viewed from this perspective then, the actions of individuals are the end result of a chain of factors originating in other parts (often the upper echelons) of the organization. These latent failures or conditions may lie dormant or undetected for some period of time prior to their manifestation as a mishap. The question for mishap investigators is how to identify and mitigate these active and latent failures or conditions. Reason's "Swiss Cheese" model describes the levels at which active failures and latent failures/conditions may occur within complex operations (see **Figure A5.1.**). Organizations implement controls to mitigate hazards. Dr. Reason philosophized four layers of controls in an organization. The holes in the layers represent failed or absent controls. Working backward from the mishap, the first level of Reason's model depicts those *Unsafe Acts of Operators* (operator, maintainers, facility personnel, etc.) that ultimately lead to a mishap. Traditionally, this is where most mishap investigations have focused their examination of human error, and consequently where most causal factors are uncovered. After all, it is typically the actions or inactions of individuals that can be directly linked to the mishap. What makes Reason's model particularly useful in mishap investigation is it forces investigators to address latent failures and conditions within the causal sequence of events. Latent failures

or conditions such as fatigue, complacency, illness, and the physical/technological environment all effect individual performance, but can be overlooked by investigators with even the best of intentions. These particular latent failures and conditions are described within the context of Reason's model as *Preconditions for Unsafe Acts*. Likewise, *Supervision* can promote unsafe conditions of operators and ultimately unsafe acts will occur. For example, if an Operations Officer were to pair a below average team leader with a very junior/inexperienced crew, the result is increased risk of mission failure. Reason's model does not stop at supervision; it also considers *Organizational Influences* that can impact performance at all levels. For instance, in times of fiscal constraints, funding may be short and may lead to limited training opportunities. The investigation process endeavors to detect and identify the "holes (*failed or absent defenses*) in the cheese" (see **Figure A5.1.**). Each mishap is not unique from its predecessors. In fact, most mishaps have very similar causes. If we know what the failures or "holes" are, we can better identify their roles in mishaps -- or better yet, detect their presence and develop a risk mitigation strategy correcting them before a mishap occurs.

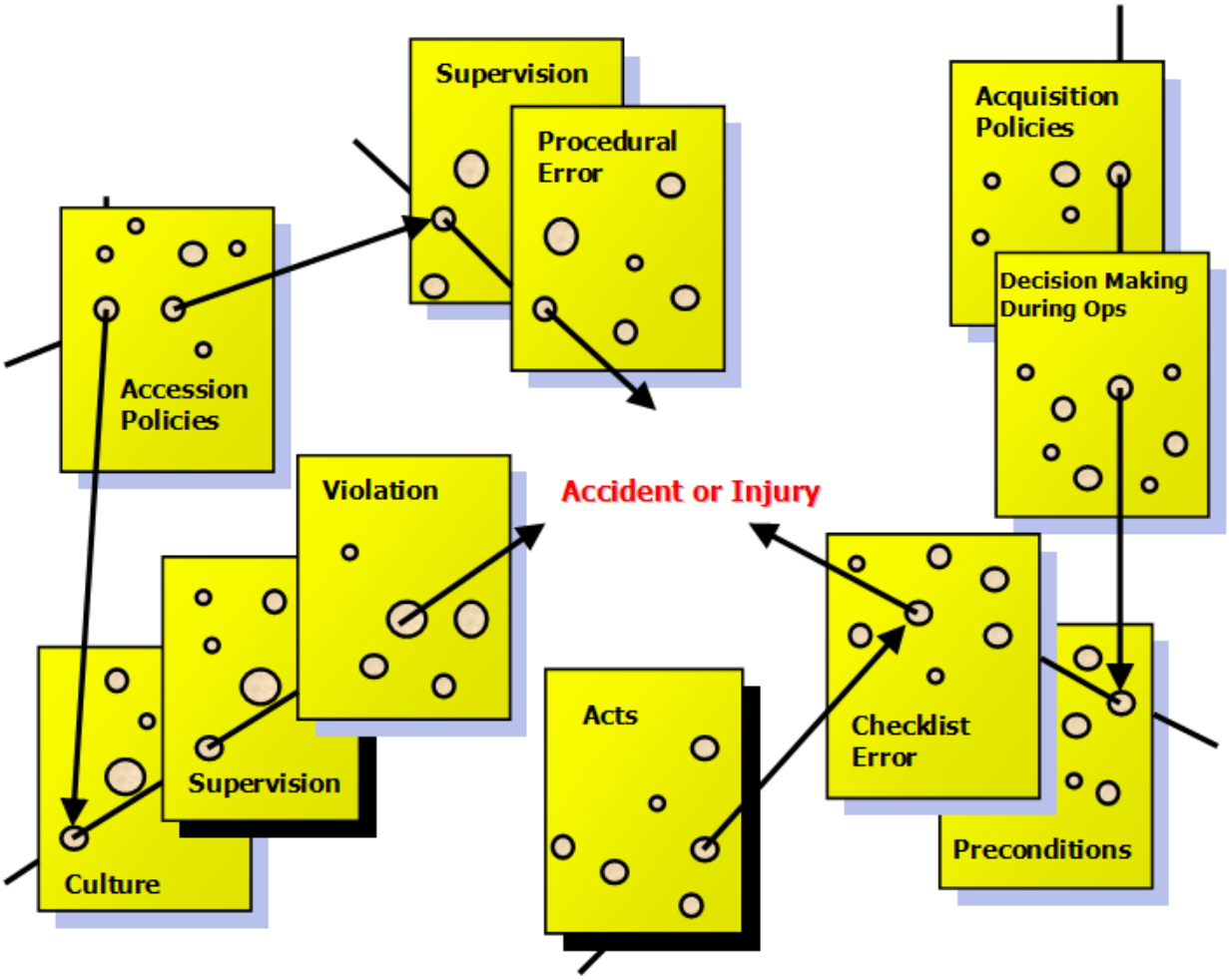
Figure A5.1. The Swiss Cheese Model



A5.4. Application. When we analyze a mishap with this framework we get a system that can identify the acts of the mishap individual, but acts of others (wingman, team/crew member, dispatcher, etc.) end up being Preconditions or Supervisory/Organizational factors. This can lead to a poor analysis of individual failures outside those of the mishap individual. When we look at real mishaps we find the dynamic looks more like a complex web of failures/errors and contributing failures/errors of multiple individual as well as failures in the "system." (See **Figure A5.2.**). Chain of events models encourage notions of linear causality and do not account for the indirect, non-linear, and feedback relationships common for accidents in

complex systems. When the mishap is investigated as an interdependent system, any person whose actions or inactions impacted the outcome of the mishap should be investigated as a mishap person. Those individuals will have their acts and preconditions identified. The context in which these acts and preconditions occurred will be captured in the supervisory and organizational factors. The supervisory and organizational factors will be identified against the mishap or event and not a specific person. Mishap factors can cross all four tiers of the model and the investigator can apply this model by entering at any tier. DOD HFACS is based on human error causation models in systems and will be used to investigate Weapons, Ground, Space, and Aviation mishaps.

Figure A5.2. Diagram of Complex Factors within a Mishap



A5.4.1. **Person Level.** The Acts and Preconditions Tiers are defined as the Person Level within the AFSAS. If a person's actions or inactions directly impacted the outcome of the mishap, capture this person's Acts and Preconditions. These are the actions or inactions of operators that tend to be close in time and space to the mishap occurrence. Traditionally referred to as "error," they are the last "acts" committed by individuals, often with immediate and tragic consequences. Capture the Preconditions for each individual who led to that person's actions or inactions.

A5.4.2. **Mishap Level.** Supervision and Organization Tiers are captured at the Mishap Level within AFSAS and are not coded against a specific person; they are assigned against the mishap or event.

Actions or inactions at these tiers are conditions that exist within the organization or elsewhere in the supervisory chain of command that affect the mishap. For example, inadequate or non-existent technical order guidance which contributes to the mishap sequence is captured at the mishap level.

A5.4.3. **Rating.** Each human factor code identified must be rated for its influence on the mishap as causal, contributory or outcome.

A5.4.3.1. **Causes** are deficiencies which if corrected would likely have prevented or mitigated damage and/or injury. Cause does not imply blame. Events/conditions that are highly probable results of other events/conditions are not causes. They should be rated as either contributors or outcomes.

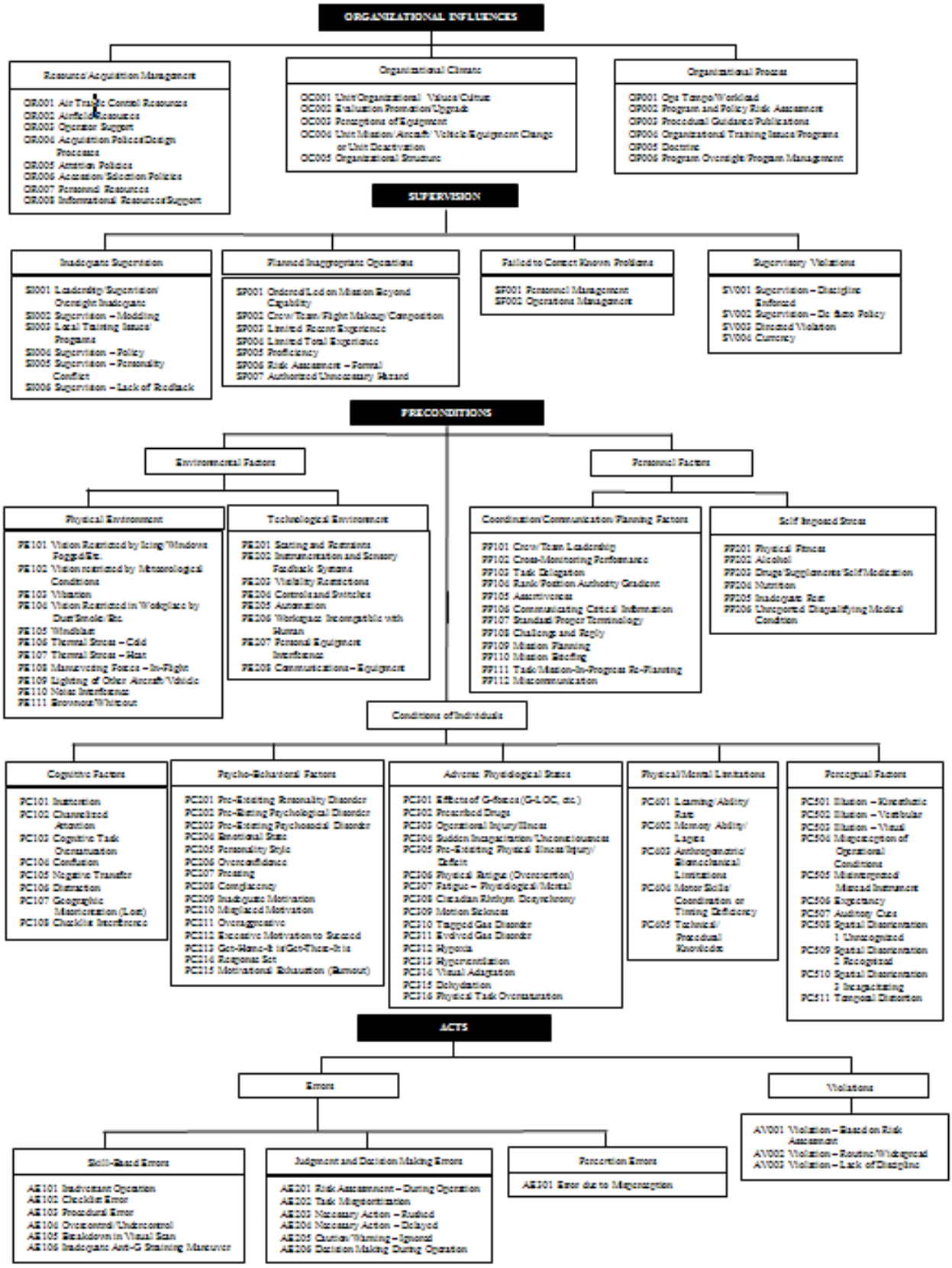
A5.4.3.2. **Contributors** are single events/conditions that are essential to the mishap sequence. They offer an independent contribution or allow the progression of other events/conditions. If an event/condition is both contributory and causal, rate it only as causal.

A5.4.3.3. **Outcomes** are single events or conditions that are present during the mishap and are highly probable results of one or more contributors/causes. All outcomes are not findings – some are present but have no material effect upon the progression of the mishap sequence. If an outcome is also a contributor or cause, rate it only as a contributor or cause.

A5.4.4. **Relationships.** Within the context of this model, failed or absent controls at one level led to failed or absent controls at another level. For example, fatigue can lead to a procedural error. If the investigator identifies that one code contributed to another code, then that relationship will be identified in AFSAS. Usually a code at a higher tier will relate to the code at the lower tier. For instance, in the example above, the investigator would relate fatigue to the procedural error. The investigator does not need to identify a relationship both up and down the chain for two related codes. One relationship is all that is required. Relationships can exist between codes in the same tier and can skip tiers. For example, a code at the Supervision Tier can be related to a code at the Acts tiers.

A5.4.5. **Figure A5.3.** shows a graphical overview of the DoD-HFACS model, with each nanocode shown in its position within the hierarchy.

Figure A5.3. DOD HFACS



DoD HFACS Nanocodes

ACTS

Acts are those factors that are most closely tied to the mishap, and can be described as active failures or actions committed by the operator that result in human error or unsafe situation.

Errors are factors in a mishap when mental or physical activities of the operator fail to achieve their intended outcome as a result of skill-based, perceptual, or judgment and decision making errors leading to an unsafe situation. Errors are unintended.

Skill-Based Errors are factors in a mishap when errors occur in the operator's execution of a routine, highly practiced task relating to procedure, training or proficiency and result in an unsafe a situation.

AE101 Inadvertent Operation

Inadvertent Operation is a factor when individual's movements inadvertently activate or deactivate equipment, controls or switches when there is no intent to operate the control or device. This action may be noticed or unnoticed by the individual.

AE102 Checklist Error

Checklist Error is a factor when the individual, either through an act of commission or omission makes a checklist error or fails to run an appropriate checklist and this failure results in an unsafe situation.

AE103 Procedural Error

Procedural Error is a factor when a procedure is accomplished in the wrong sequence or using the wrong technique or when the wrong control or switch is used. This also captures errors in navigation, calculation or operation of automated systems.

AE104 Overcontrol/ Undercontrol

Overcontrol/Undercontrol is a factor when an individual responds inappropriately to conditions by either overcontroling or undercontroling the aircraft/vehicle/system. The error may be a result of preconditions or a temporary failure of coordination.

AE105 Breakdown in Visual Scan

Breakdown in Visual Scan is a factor when the individual fails to effectively execute learned / practiced internal or external visual scan patterns leading to unsafe situation.

AE106 Inadequate Anti-G Straining Maneuver (AGSM)

Inadequate Anti-G Straining Maneuver is a factor when the individuals AGSM is improper, inadequate, poorly timed or non-existent and this leads to adverse neurocirculatory effects.

Judgment and Decision-Making Errors are factors in a mishap when behavior or actions of the individual proceed as intended yet the chosen plan proves inadequate to achieve the desired end-state and results in an unsafe situation.

AE201 Risk Assessment – During Operation

Risk Assessment – During Operation is a factor when the individual fails to adequately evaluate the risks associated with a particular course of action and this faulty evaluation leads to inappropriate decision and subsequent unsafe situation. This failure occurs in real-time when formal risk-assessment procedures are not possible.

AE202 Task Misprioritization

Task Misprioritization is a factor when the individual does not organize, based on accepted prioritization techniques, the tasks needed to manage the immediate situation.

AE203 Necessary Action – Rushed

Necessary Action – Rushed is a factor when the individual takes the necessary action as dictated by the situation but performs these actions too quickly and the rush in taking action leads to an unsafe situation.

AE204 Necessary Action – Delayed

Necessary Action – Delayed is a factor when the individual selects a course of action but elects to delay execution of the actions and the delay leads to an unsafe situation.

AE205 Caution/Warning – Ignored

Caution/Warning – Ignored is a factor when a caution or warning is perceived and understood by the individual but is ignored by the individual leading to an unsafe situation.

AE206 Decision-Making During Operation

Decision-Making During Operation is a factor when the individual through faulty logic selects the wrong course of action in a time-constrained environment.

Perception Errors are factors in a mishap when misperception of an object, threat or situation, (such as visual, auditory, proprioceptive, or vestibular illusions, cognitive or attention failures, etc), results in human error.

AE301 Error due to Misperception

Error due to Misperception is a factor when an individual acts or fails to act based on an illusion; misperception or disorientation state and this act or failure to act creates an unsafe situation.

Violations are factors in a mishap when the actions of the operator represent willful disregard for rules and instructions and lead to an unsafe situation. Violations are deliberate.

AV001 Violation - Based on Risk Assessment

Violation- Based on Risk Assessment is a factor when the consequences/risk of violating published procedures was recognized, consciously assessed and honestly determined by the individual, crew or team to be the best course of action. Routine "work-arounds" and unofficial procedures that are accepted by the community as necessary for operations are also captured under this code.

AV002 Violation - Routine/Widespread

Violation - Routine/Widespread is a factor when a procedure or policy violation is systemic in a unit/setting and not based on a risk assessment for a specific situation. It needlessly commits the individual, team, or crew to an unsafe course-of-action. These violations may have leadership sanction and may not routinely result in disciplinary/administrative action. Habitual violations of a single individual or small group of individuals within a unit can constitute a routine/widespread violation if the violation was not routinely disciplined or was condoned by supervisors. These violations may also be referred to as "Routine Violations."

AV003 Violation - Lack of Discipline

Violation - Lack of Discipline is a factor when an individual, crew or team intentionally violates procedures or policies without cause or need. These violations are unusual or isolated to specific individuals rather than larger groups. There is no evidence of these violations being condoned by leadership. These violations may also be referred to as "exceptional violations." (NOTE: These violations may also carry UCMJ consequences. Boards should consult the Judge Advocate of the convening authority.)

PRECONDITIONS

Preconditions are factors in a mishap if active and/or latent preconditions such as conditions of the operators, environmental or personnel factors affect practices, conditions or actions of individuals and result in human error or an unsafe situation.

Environmental Factors are factors in a mishap if physical or technological factors affect practices, conditions and actions of individual and result in human error or an unsafe situation.

Physical Environment is a factor in a mishap if environmental phenomena such as weather, climate, white-out or brown out conditions affect the actions of individuals and result in human error or an unsafe situation.

PE101 Vision Restricted by Icing/Windows Fogged/Etc

Vision Restricted by Icing/Windows Fogged/Etc is a factor when it is determined by the investigator that icing or fogging of the windshield/windscreen or canopy restricted the vision of the individual to a point where normal duties were affected.

PE102 Vision Restricted by Meteorological Conditions

Vision Restricted by Meteorological Conditions is a factor when weather, haze, or darkness restricted the vision of the individual to a point where normal duties were affected.

PE103 Vibration

Vibration is a factor when the intensity or duration of the vibration is sufficient to cause impairment of vision or adversely effect the perception of orientation.

PE104 Vision Restricted in Workspace by Dust/Smoke/Etc.

Vision restricted in workspace by dust/smoke/etc. is a factor when dust, smoke, etc. inside the cockpit, vehicle or workstation restricted the vision of the individual to a point where normal duties were affected.

PE105 Windblast

Windblast is a factor when the individual's ability to perform required duties is degraded during or after exposure to a windblast situation.

PE106 Thermal Stress – Cold

Thermal Stress – Cold is a factor when the individual is exposed to cold resulting in compromised function.

PE107 Thermal Stress – Heat

Thermal Stress – Heat is a factor when the individual is exposed to heat resulting in compromised function.

PE108 Maneuvering Forces – In-Flight

Maneuvering Forces – In-Flight is a factor when acceleration forces of longer than one second cause injury, prevent or interfere with the performance of normal duties. Do not use this code to capture G-induced loss of consciousness.

PE109 Lighting of Other Aircraft/Vehicle

Lighting of Other Aircraft/Vehicle is a factor when the absence, pattern, intensity or location of the lighting of other aircraft/vehicle prevents or interferes with safe task accomplishment.

PE110 Noise Interference

Noise Interference is a factor when any sound not directly related to information needed for task accomplishment interferes with the individual's ability to perform that task.

PE111 Brownout/Whiteout

Brownout/Whiteout is a factor when dust, snow, water, ash or other particulates in the environment are disturbed by the aircraft, vehicle or person and cause a restriction of vision to a point where normal duties are affected

Technological Environment is a factor in a mishap when cockpit/vehicle/control station/workspace design factors or automation affect the actions of individuals and result in human error or an unsafe situation.

PE201 Seating and Restraints

Seating and Restraints is a factor when the design of the seat or restraint system, the ejection system, seat comfort or poor impact-protection qualities of the seat create an unsafe situation.

PE202 Instrumentation and Sensory Feedback Systems

Instrumentation and Sensory Feedback Systems is a factor when instrument factors such as design, reliability, lighting, location, symbology or size are inadequate and create an unsafe

situation. This includes Night Vision Displays, Heads-Up Display, off-bore-site and helmet-mounted display systems and inadequacies in auditory or tactile situational awareness or warning systems such as aural voice warnings or stick shakers.

PE203 Visibility Restrictions

Visibility Restrictions are a factor when the lighting system, windshield / windscreen / canopy design, or other obstructions prevent necessary visibility and create an unsafe situation. This includes glare or reflections on the canopy / windscreen / windshield. Visibility restrictions due to weather or environmental conditions are captured under PE101 or PE102.

PE204 Controls and Switches

Controls and Switches is a factor when the location, shape, size, design, reliability, lighting or other aspect of a control or switch is inadequate and this leads to an unsafe situation.

PE205 Automation

Automation is a factor when the design, function, reliability, use guidance, symbology, logic or other aspect of automated systems creates an unsafe situation.

PE206 Workspace Incompatible with Human

Workspace Incompatible with Human is a factor when the workspace is incompatible with the mission requirements and mission safety for this individual.

PE207 Personal Equipment Interference

Personal Equipment Interference is a factor when the individual's personal equipment interferes with normal duties or safety.

PE208 Communications – Equipment

Communications - Equipment is a factor when comm. equipment is inadequate or unavailable to support mission demands. (i.e. aircraft/vehicle with no intercom) This includes electronically or physically blocked transmissions. Communications can be voice, data or multi-sensory.

Condition of Individuals is a factor in a mishap if cognitive, psycho-behavioral, adverse physical state, or physical/mental limitations affect practices, conditions or actions of individuals and result in human error or an unsafe situation.

Cognitive Factors are factors in a mishap if cognitive or attention management conditions affect the perception or performance of individuals and result in human error or an unsafe situation.

PC101 Inattention

Inattention is a factor when the individual has a state of reduced conscious attention due to a sense of security, self-confidence, boredom or a perceived absence of threat from the environment which degrades crew performance. (This may often be a result of highly repetitive tasks. Lack of a state of alertness or readiness to process immediately available information.)

PC102 Channelized Attention

Channelized Attention is a factor when the individual is focusing all conscious attention on a limited number of environmental cues to the exclusion of others of a subjectively equal or higher or more immediate priority, leading to an unsafe situation. May be described as a tight focus of attention that leads to the exclusion of comprehensive situational information.

PC103 Cognitive Task Oversaturation

Cognitive Task Oversaturation is a factor when the quantity of information an individual must process exceeds their cognitive or mental resources in the amount of time available to process the information.

PC104 Confusion

Confusion is a factor when the individual is unable to maintain a cohesive and orderly awareness of events and required actions and experiences a state characterized by bewilderment, lack of clear thinking, or (sometimes) perceptual disorientation.

PC105 Negative Transfer

Negative Transfer is a factor when the individual reverts to a highly learned behavior used in a previous system or situation and that response is inappropriate or degrades mission performance.

PC106 Distraction

Distraction is a factor when the individual has an interruption of attention and/or inappropriate redirection of attention by an environmental cue or mental process that degrades performance.

PC107 Geographic Misorientation (Lost)

Geographic Misorientation (Lost) is a factor when the individual is at a latitude and/or longitude different from where he believes he is or at a lat/long unknown to the individual and this creates an unsafe situation.

PC108 Checklist Interference

Checklist Interference is a factor when an individual is performing a highly automated/learned task and is distracted by anther cue/event that results in the interruption and subsequent failure to complete the original task or results in skipping steps in the original task.

Psycho-Behavioral Factors are factors when an individual's personality traits, psychosocial problems, psychological disorders or inappropriate motivation creates an unsafe situation.

PC201 Pre-Existing Personality Disorder

Pre-existing Personality Disorder is a factor when a qualified professional determines the individual met Diagnostic and Statistical Manual criteria for a personality disorder.

PC202 Pre-Existing Psychological Disorder

Pre-existing Psychological Disorder is a factor when a qualified professional determines the individual met Diagnostic and Statistical Manual criteria for a psychological disorder.

PC203 Pre-Existing Psychosocial Problem

Pre-existing Psychosocial Problem is a factor when a qualified professional determines the individual met Diagnostic and Statistical Manual criteria for a psychosocial problem.

PC204 Emotional State

Emotional State is a factor when the individual is under the influence of a strong positive or negative emotion and that emotion interferes with duties.

PC205 Personality Style

Personality style is a factor when the individual's personal interaction with others creates an unsafe situation. Examples are authoritarian, over-conservative, impulsive, invulnerable, submissive or other personality traits that result in degraded crew performance.

PC206 Overconfidence

Overconfidence is a factor when the individual overvalues or overestimates personal capability, the capability of others or the capability of aircraft/vehicles or equipment and this creates an unsafe situation.

PC207 Pressing

Pressing is a factor when the individual knowingly commits to a course of action that presses them and/or their equipment beyond reasonable limits.

PC208 Complacency

Complacency is a factor when the individual's state of reduced conscious attention due to an attitude of overconfidence, undermotivation or the sense that others "have the situation under control" leads to an unsafe situation.

PC209 Inadequate Motivation

Inadequate Motivation is a factor when the individual's motivation to accomplish a task or mission is weak or indecisive.

PC210 Misplaced Motivation

Misplaced Motivation is a factor when an individual or unit replaces the primary goal of a mission with a personal goal.

PC211 Overaggressive

Overaggressive is a factor when an individual or crew is excessive in the manner in which they conduct a mission.

PC212 Excessive Motivation to Succeed

Excessive Motivation to Succeed is a factor when the individual is preoccupied with success to the exclusion of other mission factors leading to an unsafe situation.

PC213 "Get-Home-Itis/Get-There-Itis"

"Get-Home-Itis/Get-There-Itis" is a factor when an individual or crew is motivated to complete a mission or reach a destination for personal reasons, thereby short cutting necessary procedures or exercising poor judgment, leading to an unsafe situation.

PC214 Response Set

Response set is a factor when the individual has a cognitive or mental framework of expectations that predispose them to a certain *course of action* regardless of other cues.

PC215 Motivational Exhaustion (Burnout)

Motivational Exhaustion (Burnout) is a factor when the individual has the type of exhaustion associated with the wearing effects of high operations and personal tempo where their operational requirements impinge on their ability to satisfy their personal requirements and leads to degraded cognitive or operational capability.

Adverse Physiological States are factors when an individual experiences a physiologic event that compromises human performance and this decreases performance and results in an unsafe situation.

PC301 Effects of G Forces (G-LOC, etc)

Effects of G Forces (G-LOC, etc) is a factor when the individual experiences G-induced loss of consciousness (GLOC), greyout, blackout or other neurocirculatory affects of sustained acceleration forces.

PC302 Prescribed Drugs

Prescribed Drugs are a factor when the individual uses a prescribed drug with measurable effect interfering with performance.

PC303 Operational Injury/Illness

Operational Injury/Illness is a factor when an injury is sustained or illness develops from the operational environment or *during* the mission and this injury or illness results in an unsafe situation. This includes toxic exposure. Details of injury, illness or toxic exposure should be captured in the medical investigation. Do not use this code to capture injury or illness that does not cause an unsafe situation or contribute to the mishap sequence.

PC304 Sudden Incapacitation/Unconsciousness

Sudden Incapacitation/Unconsciousness is a factor when the individual has an abrupt loss of functional capacity/conscious awareness (not GLOC). Capture medical causes for the incapacitation in the AFSAS medical module.

PC305 Pre-Existing Physical Illness/Injury/Deficit

Pre-Existing Physical Illness/Injury/Deficit is a factor when a physical illness, injury or deficit that existed at the time the individual boarded the aircraft or began the mission/task causes an

unsafe situation. This includes situations where waivered physical defects contribute to an unsafe situation and situations where vision deficit or loss of prosthetic devices during the mission cause an unsafe situation. An individual must board the aircraft or begin the mission/task with prior knowledge of illness/injury/deficit otherwise mark and rate PC303. Details of injury, illness or deficit should be captured in the medical investigation. Do not use this code to capture injury or illness that does not cause an unsafe situation or contribute to the mishap sequence (i.e. medivac patient whose condition deteriorates during flight).

PC306 Physical Fatigue (Overexertion)

Physical Fatigue (Overexertion) is a factor when the individual's diminished physical capability is due to overuse (time/relative load) and it degrades task performance. It includes the effects of prolonged physical activity, or the effects of brief but relatively extreme physical activity, either of which taxes a person's physical endurance or strength beyond the individual's normal limits.

PC307 Fatigue - Physiological/Mental

Fatigue - Physiological/Mental is a factor when the individual's diminished physical or mental capability is due to an inadequate recovery, as a result of restricted or shortened sleep or physical or mental activity during prolonged wakefulness. Fatigue may additionally be described as acute, cumulative or chronic.

PC308 Circadian Rhythm Desynchrony

Circadian Rhythm Desynchrony is a factor when the individual's normal, 24-hour rhythmic biological cycle (circadian rhythm) is disturbed and it degrades task performance. This is caused typically by night work or rapid movement (such as one time zone per hour) across several time zones. Referred to as "shift lag" and "jet lag." Time in the new time zone will lead to adaptation and recovery; the amount of time depends on the number of time zones crossed and the direction of travel. Recovery from shift lag may never occur.

PC309 Motion Sickness

otion Sickness is a factor when the symptoms of motion sickness impair normal performance. Motion sickness symptoms include nausea, sweating, flushing, vertigo, headache, stomach awareness, malaise, and vomiting.

PC310 Trapped Gas Disorders

Trapped Gas Disorders are a factor when gasses in the middle ear, sinuses, teeth, or intestinal tract expand or contract on ascent or descent causing an unsafe situation. Also capture alternobaric vertigo under this code. If the alternobaric vertigo induces spatial disorientation you must mark and rate PC508, PC509 or PC510.

PC311 Evolved Gas Disorders

Evolved gas disorders are a factor when inert-gas evolves in the blood causing an unsafe situation. This includes, chokes, CNS, bends or paresthesias or other conditions caused by inert-gas evolution.

PC312 Hypoxia

Hypoxia is a factor when the individual has insufficient oxygen supply to the body sufficient to cause an impairment of function.

PC313 Hyperventilation

Hyperventilation is a factor when the effect of ventilating above the physiological demands of the body causes the individual's performance capabilities to be degraded.

PC314 Visual Adaptation

Visual Adaptation is a factor when the normal human limitation of dark-adaptation rate affects safety, for example, when transitioning between aided and unaided night vision.

PC315 Dehydration

Dehydration is a factor when the performance of the operator is degraded due to dehydration as a result of excessive fluid losses due to heat stress or due to insufficient fluid intake.

PC316 Physical Task Oversaturation

Physical Task Oversaturation is a factor when the number or complexity of manual tasks in a compressed time period exceeds an individual's capacity to perform.

Physical/Mental Limitations are factors in a mishap when an individual, temporarily or permanently lacks the physical or mental capabilities to cope with a situation and this insufficiency causes an unsafe situation.

PC401 Learning Ability/Rate

Learning Ability/Rate is a factor when the individual's relative efficiency with which new information is acquired, and relatively permanent adjustments made in behavior or thinking, are not consistent with mission demands.

PC402 Memory Ability/Lapses

Memory Ability/Lapses are a factor when the individual is unable or has lapses in the ability to recall past experience needed for safe mission completion. (Experience includes any information a person receives through any means, any cognitive functions he or she performed on that information, and any response he or she made as a result of it.)

PC403 Anthropometric/Biomechanical Limitations

Anthropometric/Biomechanical limitations are a factor when the size, strength, dexterity, mobility or other biomechanical limitations of an individual creates an unsafe situation. It must be expected that the average individual qualified for that duty position could accomplish the task in question.

PC404 Motor Skill/Coordination or Timing Deficiency

Motor Skill/Coordination or Timing Deficiency is a factor when the individual lacks the required psychomotor skills, coordination or timing skills necessary to accomplish the task attempted.

PC405 Technical/Procedural Knowledge

Technical/Procedural Knowledge is a factor when an individual was adequately exposed to the information needed to perform the mission element but did not absorb it. Lack of knowledge implies no deficiency in the training program, but rather the failure of the individual to absorb or retain the information. (Exposure to information at a point in the past does not imply "knowledge" of it.)

Perceptual Factors are factors in a mishap when misperception of an object, threat or situation, (visual, auditory, proprioceptive, or vestibular conditions) creates an unsafe situation.

PC501 Illusion – Kinesthetic

Illusion – Kinesthetic is a factor when somatosensory stimuli of the ligaments, muscles, or joints cause the individual to have an erroneous perception of orientation, motion or acceleration leading to degraded performance. If this illusion leads to spatial disorientation you must mark and rate PC508, PC509 or PC510.

PC502 Illusion – Vestibular

Illusion – Vestibular is a factor when stimuli acting on the semicircular ducts or otolith organs of the vestibular apparatus cause the individual to have an erroneous perception of orientation, motion or acceleration leading to degraded performance. (If this illusion leads to spatial disorientation you must mark and rate PC508, PC509 or PC510.)

PC503 Illusion – Visual

Illusion – Visual is a factor when visual stimuli result in an erroneous perception of orientation, motion or acceleration, leading to degraded performance (if this illusion leads to spatial disorientation you must mark and rate PC508, PC509 or PC510.)

PC504 Misperception of Operational Conditions

Misperception of Operational Conditions is a factor when an individual misperceives or misjudges altitude, separation, speed, closure rate, road/sea conditions, aircraft/vehicle location within the performance envelope or other operational conditions and this leads to an unsafe situation.

PC505 Misinterpreted/Misread Instrument

Misinterpreted/Misread Instrument is a factor when the individual is presented with a correct instrument reading but its significance is not recognized, it is misread or is misinterpreted.

PC506 Expectancy

Expectancy is a factor when the individual's expects to perceive a certain reality and those expectations are strong enough to create a *false perception* of the expectation.

PC507 Auditory Cues

Auditory Cues is a factor when the auditory inputs are correctly interpreted but are misleading or disorienting. Also when the inputs are incorrectly interpreted and cause an impairment of normal performance.

PC508 Spatial Disorientation (Type 1) Unrecognized

Spatial Disorientation is a failure to correctly sense a position, motion or attitude of the aircraft or of oneself within the fixed coordinate system provided by the surface of the earth and the gravitational vertical. Spatial Disorientation (Type 1) Unrecognized is a factor when a person's cognitive awareness of one or more of the following varies from reality: attitude; position; velocity; direction of motion or acceleration. Proper control inputs are not made because the need is unknown.

PC509 Spatial Disorientation (Type 2) Recognized

Spatial Disorientation is a failure to correctly sense a position, motion or attitude of the aircraft or of oneself within the fixed coordinate system provided by the surface of the earth and the gravitational vertical. Spatial Disorientation (Type 2) is a factor when recognized perceptual confusion is induced through one or more of the following senses: visual; vestibular; auditory; tactile; proprioception or kinesthetic. Proper control inputs are still possible.

PC510 Spatial Disorientation (Type 3) Incapacitating

Spatial Disorientation is a failure to correctly sense a position, motion or attitude of the aircraft or of oneself within the fixed coordinate system provided by the surface of the earth and the gravitational vertical. Spatial Disorientation (Type 3) Incapacitating is a factor when an individual is unable to make proper control inputs for safe operation of the aircraft or system due to a conflict (often extreme) between the sensory systems identified in type 2.

PC511 Temporal Distortion

Temporal Distortion is a factor when the individual experiences a compression or expansion of time relative to reality leading to an unsafe situation (often associated with a "fight or flight" response).

Personnel Factors are factors in a mishap if self imposed stressors or crew resource management affect practices, conditions or actions of individuals and result in human error or an unsafe situation.

Coordination/Communication/Planning Factors refer to interactions among individuals, crews, and teams involved with the preparation and execution of a mission that resulted in human error or an unsafe situation.

PP101 Crew/Team Leadership

Crew/Team Leadership is a factor when the crew/team leadership techniques failed to facilitate a proper crew climate, to include establishing and maintaining an accurate and shared understanding of the evolving mission and plan on the part of all crew or team members.

PP102 Cross-Monitoring Performance

Cross-monitoring performance is a factor when crew or team members failed to monitor, assist or back-up each other's actions and decisions.

PP103 Task Delegation

Task delegation is a factor when the crew or team members failed to actively manage the distribution of mission tasks to prevent the overloading of any crewmember.

PP104 Rank/Position Authority Gradient

Rank/position authority gradient is a factor when the differences in rank of the team, crew or flight caused the mission performance capabilities to be degraded. Also conditions where for-

mal or informal authority gradient is too steep or too flat across a crew, team or flight and this condition degrades collective or individual performance.

PP105 Assertiveness

Assertiveness is a factor when individuals failed to state critical information or solutions with appropriate persistence.

PP106 Communicating Critical Information

Communicating critical information is a factor when known critical information was not provided to appropriate individuals in an accurate or timely manner.

PP107 Standard/Proper Terminology

Standard/proper terminology is a factor when clear and concise terms, phrases hand signals, etc per service standards and training were not used.

PP108 Challenge and Reply

Challenge and reply is a factor when communications did not include supportive feedback or acknowledgement to ensure that personnel correctly understand announcements or directives.

PP109 Mission Planning

Mission planning is a factor when an individual, crew or team failed to complete all preparatory tasks associated with planning the mission, resulting in an unsafe situation. Planning tasks include information collection and analysis, coordinating activities within the crew or team and with appropriate external agencies, contingency planning, and risk assessment.

PP110 Mission Briefing

Mission briefing is a factor when information and instructions provided to individuals, crews, or teams were insufficient, or participants failed to discuss contingencies and strategies to cope with contingencies.

PP111 Task/Mission-In-Progress Re-Planning

Task/mission-in-progress re-planning is a factor when crew or team members fail to adequately reassess changes in their dynamic environment during mission execution and change their mission plan accordingly to ensure adequate management of risk.

PP112 Miscommunication

Miscommunication is a factor when correctly communicated information is misunderstood, misinterpreted, or disregarded.

Self-Imposed Stress is a factor in a mishap if the operator demonstrates disregard for rules and instructions that govern the individuals readiness to perform, or exhibits poor judgment when it comes to readiness and results in human error or an unsafe situation.

PP201 Physical Fitness

Physical Fitness is a factor when the relative physical state of the individual, in terms of a regular rigorous exercise program or a physically active lifestyle, is not adequate to support mission demands.

PP202 Alcohol

Alcohol is a factor when the acute or residual effects of alcohol impaired performance or created an unsafe situation.

PP203 Drugs/Supplements/Self medication

Drugs/Supplements/Self-medication is a factor when the individual takes any drug, other than prescribed, that interferes with performance. This includes nicotine or caffeine in sufficient quantities to cause impairment of normal function. This also includes any chemical compound taken for purposes of prevention of disease, treatment of disease, weight management, mood alteration, birth control or sleep management, etc. The effects may be direct or residual. Alcohol is captured under PP206.

PP204 Nutrition

Nutrition is a factor when the individual's nutritional state or poor dietary practices are inadequate to fuel the brain and body functions resulting in degraded performance

PP205 Inadequate Rest

Inadequate rest is a factor when the opportunity for rest was provided but the individual failed to take the opportunity to rest.

PP206 Unreported Disqualifying Medical Condition

Unreported Disqualifying Medical Condition is a factor when the operator intentionally operates/flies with a known disqualifying medical condition that results in an unsafe situation.

SUPERVISION

Supervision is a factor in a mishap if the methods, decisions or policies of the supervisory chain of command directly affect practices, conditions, or actions of individual and result in human error or an unsafe situation.

Inadequate Supervision is a factor in a mishap when supervision proves inappropriate or improper and fails to identify hazard, recognize and control risk, provide guidance, training and/or oversight and results in human error or an unsafe situation.

SI001 Leadership/Supervision/Oversight Inadequate

Leadership/Supervision/Oversight Inadequate is a factor when the availability, competency, quality or timeliness of leadership, supervision or oversight does not meet task demands and creates an unsafe situation. Inappropriate supervisory pressures are also captured under this code.

SI002 Supervision – Modeling

Supervision – Modeling is a factor when the individual's learning is influenced by the behavior of peers and supervisors and when that learning manifests itself in actions that are either inappropriate to the individual's skill level or violate standard procedures and lead to an unsafe situation.

SI003 Local Training Issues/Programs

Local Training Issues/Programs are a factor when one-time or recurrent training programs, upgrade programs, transition programs or any other local training is inadequate or unavailable (etc) and this creates an unsafe situation. (Note: the failure of an individual to absorb the training material in an adequate training program does not indicate a training program problem. Capture these factors under PC401 "Learning ability/rate" or PC405 "Technical/Procedural Knowledge." The failure of an individual to recall learned information under stress or while fatigued despite attending an adequate training program does not indicate a training program problem. Capture these factors under PC402 "Memory/Ability lapses" or other cognitive factors such as PC104 "Confusion," PC106 "Distraction," PC105 "Negative Transfer," etc.)

SI004 Supervision – Policy

Supervision – Policy is a factor when policy or guidance or lack of a policy or guidance leads to an unsafe situation.

SI005 Supervision – Personality Conflict

Supervision – Personality Conflict is a factor when a supervisor and individual member experience a "personality conflict" that leads to a dangerous error in judgment / action.

SI006 Supervision – Lack of Feedback

Supervision – Lack of Feedback is a factor when information critical to a potential safety issue had been provided to supervisory or management personnel without feedback to the source (failure to close the loop).

Planned Inappropriate Operations is a factor in a mishap when supervision fails to adequately assess the hazards associated with an operation and allows for unnecessary risk. It is also a factor when supervision allows non-proficient or inexperienced personnel to attempt missions beyond their capability or when crew or flight makeup is inappropriate for the task or mission.

SP001 Ordered/Led on Mission Beyond Capability

Ordered/Led on Mission Beyond Capability is a factor when supervisor/management directs personnel to undertake a mission beyond their skill level or beyond the capabilities of their equipment.

SP002 Crew/Team/Flight Makeup/Composition

Crew/Team/Flight Makeup/Composition is a factor when, in the opinion of the investigator, the makeup of the crew or of the flight should have reasonably raised obvious safety concerns in the minds of crewmembers involved in the mission, or in any other individual directly related to the scheduling of this mission.

SP003 Limited Recent Experience

Limited Recent Experience is a factor when the supervisor selects an individual whose experience for either a specific maneuver, event or scenario is not sufficiently current to permit safe mission execution.

SP004 Limited Total Experience

Limited Total Experience is a factor when a supervisor selects an individual who has performed a maneuver, or participated in a specific scenario, infrequently or rarely.

SP005 Proficiency

Proficiency is a factor when and individual is not proficient in a task, mission or event.

SP006 Risk Assessment – Formal

Risk Assessment – Formal is a factor when supervision does not adequately evaluate the risks associated with a mission or when pre-mission risk assessment tools or risk assessment programs are inadequate.

SP007 Authorized Unnecessary Hazard

Authorized Unnecessary Hazard is a factor when supervision authorizes a mission or mission element that is unnecessarily hazardous without sufficient cause or need. Includes intentionally scheduling personnel for mission or operation that they are not qualified to perform.

Failure to Correct Known Problem is a factor in a mishap when supervision fails to correct known deficiencies in documents, processes or procedures, or fails to correct inappropriate or unsafe actions of individuals, and this lack of supervisory action creates an unsafe situation.

SF001 – Personnel Management

Personnel management is a factor when a supervisor fails to identify an operator or aviator who exhibits recognizable risky behaviors or unsafe tendencies or fails to institute remedial actions when an individual is identified with risky behaviors or unsafe tendencies.

SF002 – Operations Management

Operations management is a factor when a supervisor fails to correct known hazardous practices, conditions or guidance that allows for hazardous practices within the scope of his/her command.

Supervisory Violations is a factor in a mishap when supervision while managing organizational assets willfully disregards instructions, guidance, rules, or operating instructions and this lack of supervisory responsibility creates an unsafe situation.

SV001 Supervision – Discipline Enforcement (Supervisory act of omission)

Supervision – Discipline Enforcement is a factor when unit (organizational) and operating rules have not been enforced by the normally constituted authority.

SV002 Supervision – De Facto Policy

Supervision – De Facto Policy is a factor when unwritten or "unofficial" policy perceived and followed by the individual, which has not been formally established by the properly constituted authority, leads to an unsafe situation.

SV003 Directed Violation

Directed Violation is a factor when a supervisor directs a subordinate to violate existing regulations, instructions or technical guidance.

SV004 Currency

Currency is a factor when an individual has not met the general training requirements for his job/weapon system and is considered "non-current" and supervision/leadership inappropriately allows the individual to perform the mission element for which the individual is non-current.

ORGANIZATIONAL INFLUENCES

Organizational Influences are factors in a mishap if the communications, actions, omissions or policies of upper-level management directly or indirectly affect supervisory practices, conditions or actions of the operator(s) and result in system failure, human error or an unsafe situation.

Resource/Acquisition Management is a factor in a mishap if resource management and/or acquisition processes or policies, directly or indirectly, influence system safety and results in poor error management or creates an unsafe situation.

OR001 Air Traffic Control Resources

Air Traffic Control Resources is a factor when inadequate monitoring of airspace, enroute navigational aids and/or language barriers in air traffic controllers cause an unsafe situation. Note: If the unsafe acts of an individual air traffic controller are determined to be a factor in a mishap then the controller must be added and investigated as a mishap person.

OR002 Airfield Resources

Airfield Resources are a factor when runways, taxiways, ramps, terminal ATC resources or nav-aids, lighting systems, SOF/RSU resources or the environment surrounding the airfield are inadequate or unsafe. If the airfield or environment created a visual illusion that contributed to the mishap sequence you must also mark and rate PC503 "Illusion -Visual."

OR003 Operator Support

Operator Support is a factor when support facilities (dining, exercise, quarters, medical care, etc) or opportunity for recreation or rest are not available or adequate and this creates an unsafe situation. This includes situations where leave is not taken for reasons other than the individual’s choice.

OR004 Acquisition Policies/Design Processes

Acquisition Policies/Design Processes is a factor when the processes through which aircraft, vehicle, equipment or logistical support are acquired allows inadequacies or when design deficiencies allow inadequacies in the acquisition and the inadequacies create an unsafe situation.

OR005 Attrition Policies

Attrition Policies is a factor when the process through which equipment is removed from service is inadequate and this inadequacy creates an unsafe situation**.**

OR006 Accession/Selection Policies

Accession/Selection Policies is a factor when the process through which individuals are screened, brought into the service or placed into specialties is inadequate and creates an unsafe situation.

OR007 Personnel Resources

Personnel Resources is a factor when the process through which manning, staffing or personnel placement or manning resource allocations are inadequate for mission demands and the inadequacy causes an unsafe situation.

OR008 Informational Resources/Support

Informational Resources/Support is a factor when weather, intelligence, operational planning material or other information necessary for safe operations planning are not available.

OR009 Financial Resources/Support

Financial Resources/Support is a factor when an organization or operation does not receive the financial resources to complete its assigned mission and this deficiency creates an unsafe situation.

Organizational Climate is a factor in a mishap if organizational variables including environment, structure, policies, and culture influence individual actions and results in human error or an unsafe situation.

OC001 Unit/Organizational Values/Culture

Unit/Organizational Values/Culture is a factor when explicit/implicit actions, statements or attitudes of unit leadership set unit/organizational values (culture) that allow an environment where unsafe mission demands or pressures exist.

OC002 Evaluation/Promotion/Upgrade

Evaluation/Promotion/Upgrade is a factor when an individual perceives that their performance on a task will inappropriately impact an evaluation, promotion or opportunity for upgrade and this pressure creates an unsafe situation. Other inappropriate supervisory pressures are captured under SI001 Supervision – Inadequate.

OC003 Perceptions of Equipment

Perceptions of Equipment is a factor when over or under confidence in an aircraft, vehicle, device, system or any other equipment creates an unsafe situation.

OC004 Unit Mission/Aircraft/Vehicle/Equipment Change or Unit Deactivation

Unit Mission/Aircraft/Vehicle/Equipment Change or Unit Deactivation is a factor when the process of changing missions/aircraft/vehicle/equipment or an impending unit deactivation creates an unsafe situation.

OC005 Organizational Structure

Organizational Structure is a factor when the chain of command of an individual or structure of an organization is confusing, non-standard or inadequate and this creates an unsafe situation.

Organizational Processes is a factor in a mishap if organizational processes such as operations, procedures, operational risk management and oversight negatively influence individual, supervisory, and/or organizational performance and results in unrecognized hazards and/or uncontrolled risk and leads to human error or an unsafe situation.

OP001 Ops Tempo/Workload

Ops Tempo/Workload is a factor when the pace of deployments, workload, additional duties, off-duty education, PME, or other workload-inducing condition of an individual or unit creates an unsafe situation.

OP002 Program and Policy Risk Assessment

Program and Policy Risk Assessment is a factor when the potential risks of a large program, operation, acquisition or process are not adequately assessed and this inadequacy leads to an unsafe situation.

OP003 Procedural Guidance/Publications

Procedural Guidance/Publications is a factor when written direction, checklists, graphic depictions, tables, charts or other published guidance is inadequate, misleading or inappropriate and this creates an unsafe situation.

OP004 Organizational Training Issues/Programs

Organizational Training Issues/Programs are a factor when one-time or initial training programs, upgrade programs, transition programs or other training that is conducted outside the local unit is inadequate or unavailable (etc) and this creates an unsafe situation. (Note: the failure of an individual to absorb the training material in an adequate training program does not indicate a training program problem. Capture these factors under PC401 "Learning Ability/ Rate" or PC405 "Technical/Procedural Knowledge." The failure of an individual to recall learned information under stress or while fatigued despite attending an adequate training program does not indicate a training program problem. Capture these factors under PC402 "Memory/ Ability lapses" or other cognitive factors such as PC104 "Confusion," PC106 "Distraction," PC105 "Negative Transfer" or one of the forms of Fatigue, etc.)

OP005 Doctrine

Doctrine is a factor when the doctrine, philosophy or concept of operations in an organization is flawed or accepts unnecessary risk and this flaw or risk acceptance leads to an unsafe situation or uncontrolled hazard.

OP006 Program Oversight/Program Management

Program Oversight/Program Management is a factor when programs are implemented without sufficient support, oversight or planning and this leads to an unsafe situation.

Attachment 6

JOINT SERVICE MEMORANDUM OF UNDERSTANDING FOR INVESTIGATIONS

MEMORANDUM OF UNDERSTANDING
AMONG
THE U.S. ARMY COMBAT READINESS CENTER,
AIR FORCE AND NAVAL SAFETY CENTERS,
COMMANDANT OF THE MARINE CORPS (SAFETY DIVISION) AND
THE U.S. COAST GUARD HEALTH AND SAFETY DIRECTORATE
FOR SAFETY INVESTIGATION AND REPORTING OF
JOINT SERVICE MISHAPS

1. Subject. The working relationship, responsibilities and understanding among U.S. Army, Air Force, Marine Corps, Navy and Coast Guard (hereafter known as the "*services*") relative to joint service safety investigation and reporting of mishaps and incidents involving personnel, equipment and facilities. For the purposes of this Memorandum of Understanding (MOU), the term "*safety centers*" includes the U.S. Army Combat Readiness Center, Air Force and Naval Safety Centers, Commandant of the Marine Corps (Safety Division) and the U.S. Coast Guard Health and Safety Directorate.

2. Purpose. DoD tasked the services to determine a lead service to investigate and report each joint service mishap. The purpose of this document is to clarify the "ownership" of a mishap when more than one service's assets are involved and to provide guidance for the establishment of a single joint safety investigative board and the selection of investigators from multiple agencies. Additionally, guidance is provided regarding preservation of physical evidence at a mishap site, accounting for losses, dissemination of reports, responsibility for recommendations, and the spirit of cooperation and professionalism expected.

3. Scope. This MOU serves to establish agreements, responsibilities, procedures, and funding requirements for Joint Service Safety Investigations involving the services. Authority for investigation of military mishaps is contained in DoD Instruction 6055.7 and Coast Guard Manual COMDTINST M5100.47.

4. Joint Service Mishap Definition. A joint service mishap is a single mishap involving two or more services in which one or more service(s) experience reportable injuries or damage. The provisions of this MOU will also be applicable to mishaps involving joint agencies or joint programs where only one service experiences a loss and two or more services are/were involved in development and acquisition of a system.

5. Understandings, Agreements and Responsibilities.

a. The service safety chiefs will determine which service will have primary responsibility for investigating and reporting each Class A joint service mishap. This authority may be delegated to safety center personnel for lower classes of mishaps. Normally, the convening authority for the investigation will be the service experiencing the greater loss, although other factors such as operational roles will also be considered. The convening service's safety investigation directives will be used in investigating and reporting the mishap. The service safety chiefs have the authority to agree, on a case-by-case basis, to an alternate approach to a safety investigation, to include not participating in the lead service's investigation.

b. The safety center which first becomes aware of a Class A, B, or C joint service mishap will provide immediate telephonic notification to the other involved services' safety centers. Each service will make available operational and technical experts for the safety investigation board as required. The service owning or controlling the facility where a mishap occurs or the service that is geographically closest, will secure, protect, document and preserve the mishap site to prevent contamination or removal

MEMORANDUM OF UNDERSTANDING CONT

of evidence. This includes ensuring search, recovery and criminal investigative organizations do not disturb the mishap scene until released by the joint board president/senior member.

c. Joint service safety investigation boards will be comprised of the following representatives:

(1) Each involved service safety chief may send safety investigators to participate in the board. These investigators will be voting/primary board members, who are experts in the program, operation and/or utilization of the facilities, personnel or equipment involved in the mishap. Those investigators will be granted access to all relevant information, both privileged and non-privileged, and related board deliberations.

(2) Other board members, including members from joint or DoD agencies, may be required as determined by the involved safety centers.

(3) Voting/primary board members are only authorized to communicate with their respective service safety chief. The board president/senior member must authorize all other communications. Non-voting/non-primary technical advisors and observers may not discuss privileged or non-privileged investigative proceedings with their parent service without approval of the board president/senior member.

(4) Voting/primary board members work solely for the safety investigation board president or senior member and will be released at their discretion.

d. The joint service safety investigation board president/senior member will allow concurrent investigators access to the mishap site and non-privileged physical evidence.

e. The convening service's safety center will promptly provide all involved services safety centers a complete, un-redacted copy of all the joint safety investigation board's reports and subsequent endorsements. Supporting documents will be provided upon request. Safety centers may further distribute any reports within DoD for safety purposes. The service producing the safety investigation report will respond to requests for copies of portions of the report, to include requests from other DoD staff sections, organizations and commands, as well as requests from the public under the Freedom of Information Act (FOIA).

f. The joint service safety investigation board's report endorsing chain will be determined by the involved safety centers.

g. The service preparing the report will clearly identify recommendations targeted toward other services or agencies and forward the recommendations to the other services' safety center or to Joint or DoD agencies when appropriate. Each service's safety center will, in turn, forward applicable recommendations to the appropriate agency, organization, and/or elements in their service. Each service's safety center will track to completion the status of those recommendations and inform any other involved service's safety center of actions taken.

h. When there is a suspected material failure, the board president/senior member will submit the item(s) in question to the service-appropriate facility for analysis. The service whose facility conducts the analysis will fund the analysis.

MEMORANDUM OF UNDERSTANDING CONT

i. Each service will provide funding for travel, per diem, rental car, and other expenses incurred by its representatives. The nearest military installation to the mishap site will provide Administrative and host base support while the board president/senior member is present. Other expenses (site security, special equipment, consultants, etc.) will be borne by the investigating service. Each service will provide funding for salvage/wreckage recovery of its own assets.

j. When briefings are requested, the service safety chiefs will coordinate requirements.

k. The service that is determined to have ownership of the mishap will account for all fatalities, injuries and property damage in that service's mishap statistics. The services recognize that this is not an obvious interpretation of DoDI 6055.7 reporting requirements, but have obtained DoD concurrence for this approach. Consistently reporting all losses in conjunction with a single event without regard to assignment of the assets assures proper prioritization of mishap prevention resources.

6. **Effective Date, Periodic Review, Modification and Termination.** This agreement is effective on the date of the last signature and will remain in effect until rescinded, revised or superseded. This agreement may be cancelled at any time by mutual agreement or by any safety center with at least 30 days advanced written notice. All safety centers will review this agreement every three years and it may be modified by mutual consent of the signatories. A written request for modification shall be provided to the other safety centers at least 60 days prior to the proposed date of changed.

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Commander, U.S. Naval safety Center

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Chief of Safety
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Commanding General
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FRED WENGER III, COL, USMC
Commandant of the Marine Corps
Director, Safety Division

Date Approved: 10 April 2006