

**BY ORDER OF THE  
SECRETARY OF THE AIR FORCE**

**AIR FORCE INSTRUCTION 91-204**

**27 APRIL 2018**



**Safety**

**SAFETY INVESTIGATION AND  
HAZARD REPORTING**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Air Force Policy Directive (AFPD) 91-2, *Safety Programs*, and Department of Defense Instruction (DoDI) 6055.07, *Mishap Notification, Investigation, Reporting, and Record Keeping*. It provides guidance that is common to investigating and reporting of all United States Air Force (USAF) safety events. It applies to all USAF, Air Force Reserve (AFR), and Air National Guard (ANG) military and civilian personnel. This Air Force Instruction (AFI) applies to commanders, managers, supervisors, and safety staffs at all levels, all persons who investigate and report Air Force (AF) events, and those persons who handle such reports. This instruction also provides guidance regarding the control and use of privileged safety reports and information. **Failure to observe the prohibitions and mandatory provisions in paragraph 4.4. by Regular AF members, AFR members on active duty or on 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 and State (Title 5) employees may result in administrative disciplinary actions without regard to otherwise applicable criminal or civil sanctions for violations of related laws.** This AFI may be supplemented at any level, but all supplements that directly implement this publication must be routed to AF Safety Center Flight Safety (AFSEC/SEF) for coordination prior to certification and approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") following the compliance statement. See AFI 33-360, *Publications and Forms Management*, for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver authority, or alternately, to the requestors commander for non-tiered compliance items. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AF Manual (AFMAN) 33-363, *Management of Records*, and

disposed of in accordance with the AF Records Disposition Schedule located in the AF Records Information Management System. For purposes of this instruction, the term "Command" includes Major Commands (MAJCOMs), and MAJCOM-like entities (higher headquarters) to include ANG, AFR Command (AFRC), Direct Reporting Units, and Field Operating Agencies and the term "Numbered AF (NAF)" includes USAF Warfare Center, AF Life Cycle Management Center, etc.

## ***SUMMARY OF CHANGES***

This document has been substantially revised and needs to be completely reviewed. Major changes include deleting Attachments 3, 4, 5, 6, 7, and 8 documents and relocating them to the AF Safety Automated System as necessary, and restructuring safety investigations to allow voluntary hazard reporting of hazards from non-damaging events before they injure Airmen or damage equipment.

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## Chapter 1

### PURPOSE AND OVERVIEW

**1.1. Purpose of Investigations and Reports.** Safety investigations and reports are conducted and written solely to prevent future mishaps. Legal investigations are conducted for all other purposes. If initiated, criminal 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 (for criminal investigations, see paragraph 5.11.2).

**1.2. Overview .** This instruction establishes guidance and procedures for conducting safety event investigations and report writing throughout the USAF. **Note:** For all AF guidance see the AF e-publishing website at <http://www.e-publishing.af.mil/> and for all DoD guidance go to <http://www.esd.whs.mil/Directives/issuances/dodm/>. For technical orders go to <http://www.tinker.af.mil/Home/Technical-Orders/>. For all Occupational and Safety Health Administration guidance go to <https://www.osha.gov/>.

**1.3. Types of Safety Investigations.** Many different events, ranging from catastrophic to observations of conditions, can lead to safety investigations. The five types of safety investigations are Mishap, Nuclear Surety, Incident, Hazard, and Safety Study.

**Table 1.1. Safety Investigations Overview.**

			Event Description	Mandatory/ Voluntary	Privileged/ Non- Privileged
Event	Mishap	All Categories	Unplanned event resulting in injury and/or damage that meets Class A-D reporting criteria.	Mandatory	Privileged
			Unplanned event resulting in injury and/or damage that meets Class E mishap and discipline-specific reporting criteria.	Mandatory	Privileged
			Unplanned event resulting in injury and/or damage that meets Class E mishap reporting criteria, but not discipline-specific reporting criteria.	Voluntary	Privileged

	Nuclear Surety	Accidents-Incidents-Deficiencies	Mishaps involving a nuclear weapon or nuclear weapon system including: -Accidents-Mishaps involving accidental, unauthorized or unexplained event(s). -Incidents not included in the accident category. - Deficiencies associated with damage to equipment listed on the Master Nuclear Certification List, violations to Weapon System Safety Rules, and deficiencies of related nuclear weapon system procedures/guidance that meets Class A-E reporting criteria	Mandatory	Privileged
		Deficiencies	- Non-damage or non-injury associated with equipment on the Master Nuclear Certification List. - Violations involving nuclear weapon system safety rules. - Deficiencies of any procedure or guidance related to nuclear weapons, systems, or equipment that may lead to a violation of weapon system safety rules.	Mandatory	Non-Privileged
	Incident	Workplace Violence	All events, planned or unplanned, involving physical violence at the workplace, including terrorist acts, that result in injury and/or damage; also includes threats of violence.	Mandatory	Non-Privileged
		Other	An unplanned event involving injury and/or damage that does not meet mishap reporting criteria.	Voluntary	Non-Privileged
	Hazard	All Disciplines	Events that do not involve injury or damage but meet discipline-specific reporting criteria.	Mandatory	Non-Privileged
			- Events that do not involve injury or damage and do not meet discipline-specific reporting criteria. - An observation of any real or potential condition that can cause occupational illness, injury, and/or damage.	Voluntary	Non-Privileged
	Safety Study	Aggregate	A commander or safety professional-initiated report of analysis examining previously investigated events and/or data derived from other sources.	Voluntary	Privileged or Non-Privileged

		Line Operatio ns Safety Audit	A commander-initiated effort to gather and examine a collection of new and/or previous observations.	Voluntary	Privileged or Non- Privileged
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1.3.1. Mishap. For the purposes of reporting and data collection, select the category and subcategory that best defines the mishap under investigation. Normally mishaps involve only one category and subcategory. However, 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. 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. **Example:** A government vehicle that hits and damages an aircraft on the flightline would be categorized as an Aviation Ground Operations mishap with motor vehicle as a cross category. Damaging occurrences that happen in logical succession are considered to be a single mishap and will result in a single safety investigation, unless there is clearly no possible initiating or sustaining relationship between occurrences. **Example:** An emergency vehicle responding to a mishap that collides with another motor vehicle is a separate mishap. Mishap reporting is mandatory for Class A through E mishaps, except for Class E mishaps that do not meet discipline-specific safety manuals (e.g. AFMAN 91-223, *Aviation Safety Investigations and Reports*, for aviation events) reporting requirements. Class E mishaps that do not meet mandatory reporting requirements may still be voluntarily reported.

1.3.1.1. Space. An AF mishap involving space systems and/or their unique support equipment and systems. Follow investigation procedures in accordance with this AFI and AFMAN 91-222, *Space Safety Investigations and Reports*, for reporting and investigation requirements.

1.3.1.1.1. Pre-Launch. A mishap occurring during ground handling, processing, transportation operations, and/or involving launch vehicles/spacecraft prior to launch (Mission Elapsed Time=0).

1.3.1.1.2. Launch/Range. A mishap involving launch vehicle operations (after Mission Elapsed Time=0), including upper stages, or range support equipment. This includes payloads that do not obtain orbit, fly-back, range safety system failures, and range support failures.

1.3.1.1.3. Orbital. A mishap occurring after successful separation from all launch vehicle components, including upper stages and transfer/kick motors, and/or a mishap that affects command and control of an orbital asset.

1.3.1.1.4. Reentry. A mishap involving reentry NOT associated with launch. This includes the re-entry of ballistic payloads, reusable space vehicles, planned re-entry of payloads, and associated debris.

1.3.1.1.5. Ground-Based Space Systems. A mishap involving ground-based space systems not involved with supporting launch or solely dedicated to supporting orbital operations. This includes systems supporting space situational awareness, launch detection, missile tracking, offensive space control and defensive space control.



1.3.1.2. Aviation. An AF mishap involving an aircraft or remotely piloted aircraft/unmanned aerial system. Follow investigation procedures in accordance with this AFI and AFMAN 91-223 for reporting and investigation requirements.

1.3.1.2.1. Flight. Any mishap where there is intent for flight and reportable damage to a Department of Defense (DoD) aircraft while being operated on AF missions. Explosives and chemical agents or guided missile mishaps that cause damage to a DoD aircraft with intent for flight are categorized as aviation flight mishaps to avoid dual reporting. This is the only aviation mishap subcategory that contributes to the flight mishap rate.

1.3.1.2.2. Flight-Related. Any mishap where there is intent for flight and no reportable damage to the aircraft itself, but the mishap involves a fatality, reportable injury, or reportable property damage. Parachuting injuries, including on-duty parachuting mishaps involving contractor aircraft, fall under this subcategory (see paragraph 5.4 for mishaps involving multiple services). A missile that is launched from a DoD aircraft, departs without damaging the aircraft, and is subsequently involved in a DoD mishap is reportable as a weapons mishap.

1.3.1.2.2.1. If the aircraft involved in a flight-related mishap is another DoD asset or US Coast Guard and that branch is leading the joint investigation, the USAF injury or damage may be accounted for through the investigating branch's safety reporting channels. **Example:** A USAF combat rescue officer fatally injured during operations in a US Army helicopter.

1.3.1.2.2.2. If the aircraft involved in a flight-related mishap is a non-DoD asset, and the DoD does not lead the investigation, the mishap will be entered into the AF Safety Automated System as non-USAF and the accounting organization in the AF Safety Automated System for the AF losses will be the "USAF At Large." **Example:** A USAF combat weather airman fatally injured in a British helicopter hoist mishap.

1.3.1.2.3. Aviation Ground Operations mishap. Any mishap that involves DoD aircraft with no intent for flight that results in reportable damage, injury, or fatality. Injuries that occur where the aircraft is the injury mechanism (e.g. struck by/against, fell from) are also considered Aviation Ground Operations mishaps.

1.3.1.2.3.1. Damage to a missile prior to the completion of weapons upload procedures, or after initiation of weapons download, is a weapons event.

1.3.1.2.3.2. Damage to an aircraft, when it is being handled as a commodity or cargo, is a Ground Industrial & Occupational mishap. Aircraft in depot status will be considered a commodity while entered into an "In-Dock Maintenance Phase" or equivalent and have depot work control documents or equivalent in lieu of standard aircraft maintenance forms.

1.3.1.3. Weapons. An AF mishap involving explosives, small arms, guided missiles, chemical agents, or directed energy weapons that do not fall in the Aviation Ground Operations category.

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

1.3.1.3.1.1. An explosion or functioning of explosive materials or devices (except as a result of enemy action). **Example:** An explosive cartridge fires with no damage; however the investigation reveals a bad micro-switch or needed procedural changes.

1.3.1.3.1.2. Inadvertent actuation, jettison, release, or launch of explosive devices.

1.3.1.3.1.3. Impacts of ordnance off-range.

1.3.1.3.1.4. A mishap in which explosives are involved, even if there is no explosion.

1.3.1.3.2. Small Arms. An on-duty mishap resulting from the use of small arms. 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 instruction unless circumstances support an incident or hazard report.

1.3.1.3.3. Guided Missile, including Ground Launched Missile. An AF 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.

1.3.1.3.4. Chemical Agent. Any unintentional or uncontrolled release of a chemical agent where:

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

1.3.1.3.4.2. Individuals exhibit symptoms of agent exposure.

1.3.1.3.4.3. 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.

1.3.1.3.5. Directed Energy Weapon. A mishap involving a directed energy weapon and/or unique directed energy weapon support equipment. Includes the application of directed energy primarily as a weapon to damage, disrupt, or destroy enemy resources. Directed energy weapons include, but are not limited to: high-power laser, microwave, and sonic/ultrasonic beam weapon systems. Mishaps involving directed energy devices that are not weapons should be reported under the Ground, Industrial and Occupational category.

1.3.1.4. Afloat. An AF mishap occurring on board or resulting from or during the operation of a DoD vessel, including mishaps during DoD diving or swimmer operations; mishaps occurring while loading, 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 to all injuries to DoD personnel occurring on board,

whether or not job related. A mishap occurring on board that results from shipyard, repair facility, or private contractor operations is a Ground Industrial & Occupational mishap, not an afloat mishap.

1.3.1.4.1. Industrial and Occupational. A mishap occurring on a vessel involving operations similar to those performed in private industry (such as boiler maintenance). Includes, but is not limited to, equipment maintenance, facility construction and maintenance, health care provision, laboratory research, and administrative and clerical tasks.

1.3.1.4.2. Sports, Recreation, and Individual Fitness. A mishap associated with an activity that requires physical exertion and skill that is governed by a set of rules or customs and often undertaken competitively and/or refreshes one's mind or body through activity that amuses or stimulates. Involves the activity of exerting muscles in various ways to keep fit through the performance of exercise. This includes all fitness activities that do not meet the criteria for command-directed or organized fitness programs.

1.3.1.4.3. Combat Support and Training. A mishap associated with a military exercise (such as RED FLAG) to maintain or increase individual or collective combat and peacekeeping skills (combat arms, martial arts, etc.).

1.3.1.4.4. Miscellaneous. A mishap not assigned to another subcategory.

1.3.1.5. Motor Vehicle. An AF mishap involving the operation of a DoD-owned, leased, or rented motorized land vehicle which injures AF personnel or results in AF property damage. This also includes Private Motor Vehicle mishaps in a traffic environment, with a vehicle that is licensed and registered. A bicyclist operating in the traffic environment in a transportation mode with no motor vehicle involvement is considered a Sports, Recreation, and Individual Fitness mishap. This category does not include sports and recreational off-road motorcycle, off-road vehicles, and all-terrain vehicle mishaps. Motor vehicle mishaps are divided into the following subcategories:

1.3.1.5.1. Government Motor Vehicle. A motor vehicle mishap involving the operation of a government motor vehicle as defined in this instruction and in DoDI 6055.04, *Department of Defense Traffic Safety Program*.

1.3.1.5.2. Government Vehicle, Other. A motor vehicle mishap involving the operation of a Government Vehicle, Other, as defined in this instruction and in DoDI 6055.04.

1.3.1.5.3. Private Motor Vehicle. A motor vehicle mishap, regardless of the identity of the operator, that does not involve a government motor vehicle or government vehicle, other, but results in a fatality or injury to military personnel on- or off-duty or to on-duty DoD civilian personnel, or reportable damage to DoD property. Fatalities and injuries to bicyclists and pedestrians involving motor vehicles are included in this category.

1.3.1.6. Ground. An AF mishap that does not meet the mishap category definition of space, aviation, weapons, afloat, or motor vehicle as defined by this instruction. A

mishap involving both on- and off-duty DoD military personnel is categorized as an on-duty mishap.

1.3.1.6.1. Industrial and Occupational. A mishap involving operations similar to those performed in private industry. Includes, but is not limited to, equipment maintenance, facility construction and maintenance, laboratory research, and administrative and clerical tasks and mishaps related to health care provision other than injury to patients under care. Natural phenomena mishaps are categorized as industrial mishaps.

1.3.1.6.2. Sports, Recreation, and Individual Fitness. A mishap associated with an activity that requires physical exertion and skill that is governed by a set of rules or customs and often undertaken competitively and/or refreshes one's mind or body through activity that amuses or stimulates. Involves the activity of exerting muscles in various ways to keep fit through the performance of exercise. This includes all fitness activities that do not meet the criteria for command-directed or organized fitness programs. A mishap involving privately-owned recreational vehicles or aircraft that are primarily being used as transportation at the time of a mishap rather than for sport or recreational purposes will be categorized as a Miscellaneous mishap.

1.3.1.6.3. Combat Support and Training. A mishap associated with a military exercise (such as RED FLAG) or a training activity designed to develop, maintain, and/or increase individual or collective combat and peacekeeping skills (combat arms, combative training, etc.).

1.3.1.6.4. Miscellaneous. A mishap not assigned to another subcategory. Also included in this subcategory are reportable mishaps occurring while using a commercial carrier such as a commercial bus, airplane, or taxicab.

1.3.2. Nuclear Surety. An AF event involving a nuclear weapon system or other radioactive material. Investigate and report events involving a nuclear weapon or nuclear weapon system including damage or failure of equipment on the Master Nuclear Certification List, violations involving nuclear weapon system safety rules, or deficiencies of any procedure or guidance related to nuclear weapons, systems or equipment that may lead to a violation of weapon system safety rules. Nuclear Surety investigations and reports are mandatory. Unclassified nuclear deficiencies, DULL SWORDS, are the only type of nuclear event handled by the AF Safety Automated System. Do not use the AF Safety Automated System for classified reporting. For classified events, report via e-mail using an appropriate secure means, such as the Secret Internet Protocol Router Network (SIPRNET). Nuclear Weapon Accidents and Incidents will be categorized as Class A mishaps. Deficiencies can meet Class A-E criteria. Reference AFMAN 91-221, *Weapons Safety Investigations and Reports*, for a complete listing of nuclear flagwords. Nuclear Surety Investigations are categorized as follows:

1.3.2.1. Accidents. Mishap involving accidental, unauthorized, or unexplained events that could or could not create the risk of war, but meets any of the criteria listed in AFMAN 91-221 (e.g. BROKEN ARROW).

1.3.2.2. Incidents. Mishaps not included in the accident category but meeting any of the criteria in AFMAN 91-221 (e.g. BENT SPEAR).

1.3.2.3. Deficiencies. Deficiencies involving damage and/or injury will be classified as mishaps. Non-damaging/non-injuring deficiencies that meet any of the DULL SWORD criteria listed in AFMAN 91-221 will be classified apart from mishaps. DULL SWORD deficiency reports may also be associated with any class mishap if damage to equipment listed in the Master Nuclear Certification List occurs or violations to Weapon System Safety Rules, and deficiencies of related nuclear weapon system procedures/guidance meets Class A-E reporting. If associated with a mishap report, privileged information criteria applies.

1.3.3. Incident. There are two categories of Incident Investigations.

1.3.3.1. Workplace Violence. Any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site. It ranges from threats and verbal abuse to physical assaults and even homicide. While these must be reported and recorded in the AF Safety Automated System by the appropriate safety office to comply with 29 Code of Federal Regulations (CFR), 1904, *Recording and Reporting Occupational Injuries and Illnesses*, they are not investigated by safety personnel.

1.3.3.2. Other. Other Incidents are unplanned events that do not meet Class A-E mishap reporting criteria (e.g., civilian off-duty injury) or other reporting criteria in this AFI. Reporting or recording these events is voluntary unless called for in accordance with 29 CFR 1904.

1.3.4. Hazard. In accordance with DoDI 6055.01, *DoD Safety and Occupational Health (SOH) Program*, hazards must be identified, eliminated, or mitigated to an acceptable level. A hazard is any real or potential condition that can cause injury, damage, or occupational illness. See discipline-specific safety manuals for mandatory reporting requirements. Voluntary reports of hazards augment other safety reporting by capturing threats and errors that may otherwise remain unknown. Certain events do not meet reportable mishap classification criteria, but are deemed important to investigate/report for hazard identification and mishap prevention. While these hazard investigations are by definition not privileged and promises of confidentiality are not offered, they are to be used for mishap prevention purposes only and will not be used as evidence for punitive, disciplinary, or adverse administrative actions against anyone unless there is intentional misrepresentation. Hazard reports are categorized as Aviation, Ground, Space, or Weapons. The following would be investigated as Hazards:

1.3.4.1. Periodically the AF investigates mishaps that do not fit the definition of an AF mishap. The AF 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 AF, 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. These type of mishaps will be investigated as Hazards. See discipline-specific safety manuals for further guidance.

1.3.4.2. Aviation mishaps involving a non- DoD aircraft or non-DoD remotely piloted aircraft/unmanned aerial system, regardless of the existence of intent for flight, which only results in damage to non-USAF equipment or injury to non-USAF personnel. For

example, an AF pilot who is uninjured during a successful ejection from a foreign-owned, single-seat fighter that is subsequently destroyed would be investigated as a Hazard since there was no damage to AF equipment or injury to AF personnel. However, if the foreign-owned aircraft is leased by the DoD and is operated by AF personnel, it would be a USAF Aviation Flight Mishap.

1.3.4.3. 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.

1.3.5. Safety Study. A safety study is an in-depth analysis of two or more events to identify root causes or hazards not previously identified utilizing AF safety investigation processes. Unlike other safety investigations, safety studies are not tied to a single event. Any aggregate study, analysis, or aggregate safety investigation containing privileged safety information from other sources (privileged safety data and/or products of deliberative processes of safety investigators/investigations) will be designated as a privileged safety product. There are two categories of safety studies:

1.3.5.1. Aggregate. Aggregate studies use two or more similar events (mishaps, incidents, or hazards) that may or may not have been previously reported to identify the root cause of a problem and make recommendations to mitigate the hazards. Examples include aircraft systems that have had a high rate of failure with the potential to lead to a catastrophic mishap, a series of traffic accidents at a particular intersection, or radars at different locations with outages that are not reportable (e.g. less than 72 hours).

1.3.5.2. Line Operations Safety Audit. A Line Operations Safety Audit is an aviation safety program developed to gather safety-related data on environmental conditions, operational complexity, and human factors issues during everyday flying operations. The Line Operations Safety Audit report in itself is non-privileged, however when a Safety Investigation Board is formed the results of the investigation may be privileged. See AFI 91-225, *Aviation Safety Programs*, for further information.

**1.4. Exceptions to mandatory reporting requirements for this AFI.** In addition to the exemptions listed in DoDI 6055.07, Table 8, the following do not need to be reported under this instruction:

1.4.1. Intentional, controlled, in-flight jettison of aerial refueling hoses/drogues unless ensuing reportable property damage. Intentional activation of flares, manually or by automatic countermeasure systems unless ensuing reportable damage.

1.4.2. Intentional or anticipated 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:

1.4.2.1. 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.

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

1.4.2.3. Damage to, or destruction of, DoD equipment or property during authorized testing, including missile and ordnance firing, and remotely piloted aircraft/unmanned aerial system used as targets or on critical profile missions, provided all of the following conditions exist:

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

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

1.4.2.4. For mishaps involving unmanned Full Scale Aerial Targets, the Interim Safety Board will conduct a preliminary review of telemetry and/or control system data from the Gulf Range Drone Control System or the Drone Formation Control System. If the preliminary review indicates the event was related to target specific systems or drone modifications, the mishap may be investigated according to AFI 99-151, *Air Launched Munition Analysis Group (ALMAG)*. In all other cases, the mishap will be investigated under this instruction and AFMAN 91-223.

1.4.3. Damage or destruction of a remotely piloted aircraft 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. Although not a reportable mishap, the accountable Command safety office will report this loss to the AF/SE via e-mail. The report will contain the date, location (when available), object identifier, short narrative, and the approval authority who accepted the risk.

1.4.4. Except when required to be reported as a Hazard, a safety report is not required when all of the following three conditions are true:

1.4.4.1. The failed item is a component part or line-replaceable unit. Examples include flightline replaceable engine components, electronic boxes, air cycle machines, pumps, tires, and drag braces. The following are major assemblies and not component parts nor line-replaceable units: aircraft subsystems such as engines, engine modules, landing gear, and gearboxes. Auxiliary power units are major assemblies unless identified by the mission design series program manager as a line-replaceable unit.

1.4.4.2. All damage and/or wear is confined to that component part or line-replaceable unit (if not confined, all associated damage costs must be added to determine if the occurrence is a reportable mishap).

1.4.4.3. The failed item is maintained as fly-to-fail (or normally used until they fail) or reached pre-determined wear limits due to normal wear and tear (as defined by the applicable technical order or program manager for aviation items).

1.4.5. Natural phenomena mishaps where adequate preparation, forecasting, and communication actions were taken and there were no injuries to DoD personnel. In order to determine if adequate actions were taken, an investigation must be initiated.

1.4.6. ANG state-activated military and ANG state employees on- or off-duty injury or illness unless their injury or illness involved AF personnel, contractor operations, or property.

1.4.7. Death due to natural causes. In the case of an on-duty death due to unrelated strenuous acts performed at work or to physical training associated with the requirement to pass physical standards, an Interim Safety Board/Safety Investigation Board will convene until the investigation rules out management oversight and the medical member determines death by natural causes. The following deaths by natural causes must be reported under this AFI:

1.4.7.1. An aircrew member during flight. **(T-1)**

1.4.7.2. A missile crewmember on alert. **(T-1)**

1.4.7.3. A combat support and training related death. **(T-1)**

1.4.8. Injury or illness to foreign nationals working for the AF as indirect hire personnel.



## Chapter 2

### RESPONSIBILITIES

**2.1. General Information.** The guidelines in this chapter establish investigating and reporting responsibilities for AF safety Mishaps, Hazards, Incidents, etc. The Secretary of the AF (SecAF), in Headquarters AF (HAF) Mission Directive 1-46, *Chief of Safety*, delegates specific DoDI 6055.07 responsibilities to the AF Chief of Safety (AF/SE).

**2.2. The AF/SE, in addition to AF Policy Directive 91-2 requirements, will:**

- 2.2.1. Provide technical and investigative expertise to safety investigations as directed by this instruction.
- 2.2.2. Prepare a Memorandum of Final Evaluation for on-duty Class A and select Class B mishaps and ensure they are disseminated to the Command Director/Chief of Safety.
- 2.2.3. Develop joint and combined investigation policy or doctrine in coordination with other services and nations.

**2.3. The AF Surgeon General will:** Ensure medical personnel provide medical information related and relevant to the investigation to appropriate individuals investigating an AF safety event.

**2.4. MAJCOM Commanders will:**

- 2.4.1. Establish policies and procedures to ensure safety events 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 MAJCOM (including subordinate units) is the action agency.
- 2.4.4. Ensure all mishaps that occur from operations of government contractors which result in reportable damage or injury to AF property or personnel, even if the government is wholly or partially repaid, are investigated and reported according to this instruction and AFI 10-220, *Contractor's Flight and Ground Operations*. 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.
- 2.4.5. Notify the AF Nuclear Weapons Center and the Defense Threat Reduction Agency Nuclear Surety Office if nuclear surety events require design agency evaluation.
- 2.4.6. Report significant events or trends that could have adverse effects on the safety, security, or reliability of nuclear weapons systems.
- 2.4.7. Ensure joint base MOA/MOUs are developed to comply with this instruction.

**2.5. The AF Materiel Command (AFMC) Commander (in addition to MAJCOM commander requirements) will:**

- 2.5.1. Provide cost analysis data to support AF safety investigations. Ensure engine, engine module, and shop replacement unit mishap cost data (materiel 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/materiel.

2.5.2. Provide verbal and written technical assistance in response to Mishap/Hazard Deficiency Reports to support AF safety investigations. Ensure all exhibit teardown and/or technical reports are provided to the safety investigator within 15 days for a Category I Mishap/Hazard Deficiency Report and 30 days for a Category II Mishap/Hazard Deficiency Report. The 15- and 30-day timelines begin upon depot induction of the exhibit. Category I Mishap/Hazard Deficiency Reports are normally submitted for Class A mishaps and Category II Mishap/Hazard Deficiency Reports are normally submitted for Class B and C mishaps. See Technical Order 00-35D-54, *United States Air Force Deficiency Reporting, Investigation, and Resolution*, for more information on completing deficiency reports.

2.5.3. Ensure the appropriate program manager for the weapon system or items involved receives and reviews Memorandum of Final Evaluations applicable to their systems and initiates publications or hardware changes as required. Maximize mishap prevention by transferring useful information from one weapon system to another.

2.5.4. Ensure a statement is included in all Performance Work Statements/Contracts concerning commercial contract maintenance that "Incident/Mishap-related prices shall be separated from other overhaul prices and shall be provided to safety investigators and AF Life Cycle Management Center Propulsion Sustainment Division (AFLCMC/LPS)."

## **2.6. The Convening Authority chosen in accordance with Chapter 5 will:**

2.6.1. Appoint and direct the safety investigation. Do not appoint the same Safety Investigation Board members to multiple ongoing investigations regardless of similarity.

2.6.2. Appoint an AF member or members as Party to any National Transportation Safety Board investigation, as appropriate. These persons must not be assigned to the safety investigation or the accident investigation.

2.6.3. Ensure ongoing safety investigations issue required safety reports in accordance with Table 7.1.

2.6.4. Ensure safety investigations cover all relevant factors and meet the requirements of the AF mishap prevention program. Convening Authorities will provide any applicable Safety Investigation Board support materials to all Safety Investigation Board Presidents/Single Investigating Officers.

2.6.5. Ensure formal safety reports are submitted in the AF Safety Automated System. If more information is found after a formal report has been submitted, the Convening Authority will reopen the investigation or send the information to the AF Safety Center.

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 take the following actions:

2.6.7.1. Notify other action agencies, the appropriate program manager (for joint programs the program manager is considered to be the Joint Program Office or

equivalent) for the weapon system or items involved, the weapons system lead command (AFPD 10-9, *Lead Command Designation and Responsibilities For Weapon Systems*), and the AF Safety Center. 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 Program Manager has access to specific technical information and other critical information as it becomes available so the Program Manager can meet Airworthiness responsibilities required by AFI 62-601, *USAF Airworthiness*, and Operational Safety, Suitability, and Effectiveness responsibilities required by AFI 63-101/20-101, *Integrated Life Cycle Management*.

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

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

**2.7. The Commander of the Regular AF installation nearest a mishap** . This includes AF-led Joint Bases or alternate organization as designated by the Convening Authority. The commander will:

2.7.1. Respond to a mishap involving DoD assets in accordance with AFI 10-2501, *Air Force Emergency Management Program* and AFMAN 10-2504, *Air Force Incident Management Guidance for Major Accidents and Natural Disasters*.

2.7.2. Provide logistical and investigative support as required. Air Reserve Component (ARC) (AF Reserve and ANG) installations, if nearest the mishap, will respond with available resources to the maximum extent possible, in coordination with the responding Regular AF installation.

2.7.2.1. Mishap response and Safety Investigation Board support MOA/MOUs between Regular AF and ARC units will be initiated by the Regular AF duty installation and maintained by the MAJCOM Director/Chief Of Safety, the AFRC Director of Safety and the National Guard Bureau (NGB) Director of Safety.

2.7.2.2. In cases where airfields are predominantly non-AF, logistical and investigative support are the responsibility of the commander of a Regular AF Wing with a safety office nearest the mishap. Contingency funds may be available to reimburse the shipping agency that handles evidence for a mishap that occurred while supporting a contingency operation. To ensure reimbursement the shipping agency must use the appropriate emergency and special program code based on its MAJCOM and the area of responsibility.

2.7.3. Appoint an Interim Safety Board to preserve evidence and gather factual data related to the mishap until the Convening Authority-appointed Safety Investigation Board or Single

Investigating Officer can conduct an investigation. Depending on the mishap, an Interim Safety Board may consist of one individual or several depending on the judgment of the installation commander.

2.7.3.1. In the event of fatalities, take great care to ensure a positive chain of custody for all human remains. If any chain of custody issues arise, contact the Convening Authority immediately.

2.7.3.2. Direct the Interim Safety Board to receive a briefing from the wing safety office immediately regarding how to conduct the Interim Safety Board and whether witnesses may be offered a promise of confidentiality.

2.7.3.3. Do not appoint personnel involved in the mishap, or their immediate supervisors, to the Interim Safety Board.

2.7.4. Ensure toxicology testing is immediately accomplished following a mishap, if required or deemed necessary.

2.7.4.1. Evidence gathering and toxicology testing should be balanced with operational requirements. For example, during remotely piloted aircraft/unmanned aerial system 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.

2.7.4.2. Maintain a legally defensible chain of custody. 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. Toxicological testing is a different process than Drug Demand Reduction Program testing. Procedural guidelines for the collection and shipment of specimens for toxicological analysis are available at the "forensic toxicology" at <http://www.health.mil/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 the Armed Forces Medical Examiner System, Division of Forensic Toxicology (see Attachment 2) to the maximum extent possible.

2.7.4.3. 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. DoD civilians will be subject to testing by consent when their action or inaction may have contributed to the mishap or in accordance with AFI 90-508, *Air Force Civilian Drug Demand Reduction Program*. Since they may only be required to complete a urinalysis, coordinate with the Civilian Personnel Office or Contracting Officer before requiring blood samples from DoD civilian or contractor employees. Blood testing will be used for toxicological testing of military members for aviation safety investigations.

2.7.4.4. For all Class A and B aviation mishaps, commanders must test all military crewmembers on the flight orders (see paragraph 2.7.4.4.2 for remotely piloted aircraft exceptions). For all on-duty Class A and B mishaps, commanders must test all military members in primary control of the involved equipment or environment, including on-

scene instructors if a student is involved. For all classes and categories of mishaps, commanders have the discretion to test crewmembers or any additional involved military members under their command whose actions or inactions, in their judgment, may have been factors in the mishap sequence. Because this is an investigation, the decision must be based on the event, not any pre-existing suspicion of drug use.

2.7.4.4.1. Because the evidence is perishable, commanders should test all involved personnel (see paragraph 2.7.4.4.2 for remotely piloted aircraft exceptions) 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 safety 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). Regular AF and ARC units should establish MOA/MOUs to clarify procedures and prevent delays.

2.7.4.4.2. For remotely piloted aircraft/unmanned aerial system Class A or B mishaps, directed medical examinations of involved crewmembers are only mandatory for the crew or crews (including instructors or evaluators performing “over the shoulder” duties) which operated the aircraft during and immediately preceding the mishap sequence. This is defined as the last two crews to operate the aircraft. Additionally, medical examinations are mandatory for any technician who performed maintenance on the ground control station or aircraft during this period.

2.7.4.5. Government contract employees (includes remotely piloted aircraft/unmanned aerial system crew) will be tested by consent or in accordance with the terms and conditions of the applicable contract, when their actions or inaction in the commander's judgment may have been a factor in the mishap sequence. Coordinate with the contracting office to assist as needed.

2.7.5. Direct the Interim Safety Board to collect medical histories of involved individuals. For requirements, refer to discipline-specific manuals.

2.7.6. Ensure the appropriate military notifications are accomplished:

2.7.6.1. When requested by public affairs office for mishap information, ensure only non-privileged information is released. Release safety information only as authorized by this instruction, specifically paragraphs 4.8 and 6.14.

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 US Army, US Navy, US Marine Corps, or US Coast Guard mishap or, if the home installation is unknown, the nearest installation of the responsible service.

2.7.6.5. Notify the Armed Forces Medical Examiner System (see Attachment 2) whenever there is a fatality of an AF member.

2.7.6.6. Notify the AF Space Command's (AFSPC) Hammer Adaptive Communications Element (see Attachment 2) if communications support is deemed necessary. The AFSPC's Hammer Adaptive Communications Element is a special purpose, quick reaction communications unit that may deploy worldwide within three hours of notification. The AFSPC's Hammer Adaptive Communications Element is funded to provide services to safety investigations at no cost to Commands or AF wings.

2.7.6.7. Notify the Military Surface Deployment and Distribution Command's Defense Transportation Tracking System (see 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 regulations.

2.7.6.8. Notify the local Command Post (Command Post may have reporting requirements in accordance with AFI 10-206, *Operational Reporting*). The responding AF installation safety office should coordinate with the Command Post on Operational Reports generated as a result of a mishap to ensure no inaccurate or privileged information is released.

2.7.7. In the US, ensure the appropriate civilian notifications are accomplished:

2.7.7.1. Notify the nearest National Transportation Safety Board regional or field office or the nearest 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 Office of Commercial Space Transportation Combined Operations Center (see Attachment 2) if licensed commercial space systems are involved in the mishap. During launch of a commercial space vehicle from an AF facility, the on-site FAA Office of Commercial Space Transportation representative will fulfill this notification requirement and up-channel as required.

2.7.7.3. Notify the nearest Occupational Safety and Health Administration area or regional office within 8 hours of an on-duty mishap when the mishap results in an AF civilian employee fatality, to include heart attack victims. For any in-patient hospitalization, amputation, or eye loss involving an AF civilian employee that occurs within 24 hours of a work-related incident, report the event within 24 hours of notification. If unable to contact the nearest Occupational and Safety Health Administration area office or regional office within the required 8-hour time frame, contact the Occupational and Safety Health Administration 24-hour toll free hotline (1-800-321-OSHA [6742]). **(T-0)**

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-AF injury or property damage.

## **2.8. The Interim Safety Board President or Investigating Officer will:**

2.8.1. Immediately coordinate with the local Safety Office for guidance on performing the duties of an Interim Safety Board.

2.8.2. Receive a briefing from the on-scene commander/incident commander recovery operations chief on all known hazards (including bloodborne pathogens) and personnel protective equipment requirements for the mishap site.

2.8.3. Preserve evidence. Preservation of evidence may include coordinating the collection of evidence from other Interim Safety Boards located at different locations.

2.8.4. Identify witnesses and conduct initial interviews, if required. Use the interview templates located in the AF Safety Automated System/Pubs & Refs/SIB Support (Go) Package at <https://afsas.safety.af.mil/publications/PublicationHomepage.do> (hereinafter AF Safety Automated System Pubs & Refs). An AF Safety Automated System account is required to access this website.

2.8.5. Gather factual data.

2.8.6. Accept control of the wreckage and/or evidence, as applicable. The Interim Safety Board President, Investigating Officer or Chief of Safety will not perform duties as on-scene commander, incident commander, or recovery operations chief.

2.8.7. Submit a non-privileged preliminary message in the AF Safety Automated System within the reporting guidelines of Table 7.1.

**2.9. The Commander of the mishap unit.** When the commander of the mishap unit and the mishap location are not co-located will:

2.9.1. Coordinate with the commander of the AF 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 the Interim Safety Board as required/requested. The commander of the mishap unit will appoint an Interim Safety Board to complete initial data gathering and preserve evidence for the Safety Investigation Board.

2.9.3. Ensure toxicology testing is performed in accordance with paragraph 2.7.4.

**2.10. Director/Chief of Safety or Equivalent at all levels will:**

2.10.1. Ensure individuals with access to safety or mishap information, privileged or otherwise, know the limitations placed on their uses and are trained on the proper procedures for protecting such materials before receiving any safety or mishap information. Ensure individuals appointed to Interim Safety Boards and to investigate mishaps are trained on the proper handling procedures of privileged safety information before receiving any safety or mishap information. Annually train, and document their training, all personnel with access to privileged safety information on the proper handling procedures. **(T-1)**

2.10.2. Maintain a current roster of personnel trained and qualified to perform Interim Safety Board/Safety Investigation Board duties for Space, Aviation, Weapons, and Ground mishaps as applicable. **(T-1)**

2.10.2.1. Annually provide potential primary interim and safety board members training on the basics of mishap investigation (AFRC will only train personnel for interim board participation per MOA/MOUs with the closest Regular AF installation). **(T-1)**

2.10.2.2. Include in annual training available human factors experts who have completed either the Aircraft Mishap Investigation and Prevention workshop, Aircraft Mishap

Investigation Course, Mishap Investigation Non-Aviation course, Introduction to Mishap Investigation course, or the legacy Flight Safety Officer course. Annually track human factors experts for completion of training and availability to support Interim Safety and Safety Investigation Boards. **(T-1)**

2.10.2.3. Annually verify that the Installation Chief of Aerospace/Aviation Medicine provides a list to the Command Chief of Aerospace/Aviation Medicine of all Flight Surgeons, Aerospace and Operational Physiologists, and Psychologists who have completed or require the Aircraft Mishap Investigation and Prevention workshop, the Aircraft Mishap Investigation, Mishap Investigation Non-Aviation, Introduction to Mishap Investigation, or the legacy Flight Safety Officer courses. **(T-1)** The list will include dates of original formal course training and most recent annual refresher training.

**2.11. Installation Chief of Aerospace/Aviation Medicine will:** Maintain a current list of all Flight Surgeons, Aerospace and Operational Physiologists, and Psychologists who have completed or require the Aircraft Mishap and Prevention workshop, the Aircraft Mishap Investigation, Mishap Investigation Non-Aviation, or legacy Flight Safety Officer courses. **(T-1)** The list will include dates of original formal course training and most recent annual refresher training. **(T-1)** This list will be provided, as required, to the installation Chief of Safety. **(T-1)**

**2.12. Deployed Unit Safety Office.** Safety personnel deployed with DoD assets or an established safety office overseas in an Area of Responsibility (AOR) responding to a mishap will:

2.12.1. Gather evidence and initiate an AF Safety Automated System report. This office will coordinate with the appointed safety investigator to compile the mishap data that will be collected locally and forward it to the owning unit for mishap report completion. **(T-1)**

2.12.2. Notify the Commander, AF Forces (COMAFFOR) safety office, who will, in turn, notify and coordinate with the Command that owns the asset (property) or personnel involved in the mishap. **(T-1)**

2.12.3. Ensure compliance with the requirements set forth in this instruction (see paragraph 2.7.) as the "nearest Regular AF installation" with regards to responding to a mishap. **(T-1)** Ultimate investigating and reporting responsibilities remain with the Convening Authority.

2.12.4. Coordinate with the appointed safety investigator to compile and complete as much of the mishap investigation report that can be accomplished at the mishap location, and then forward to the owning organization for final entry into the AF Safety Automated System for proper accountability. **(T-1)**

**2.13. The 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 AF and to cooperate in accordance with this instruction, in any AF investigation. **(T-1)** Cooperation will include toxicology testing. **(T-1)** For additional guidance on contracts see AFI 91-202, *The US Air Force Mishap Prevention Program*.

**2.14. The Safety Investigation Board will:** Work solely for the Convening Authority while accomplishing the requirements outlined in Chapters 6, 7, and 8 of this instruction.



**2.15. The Single Investigating Officer will:** Work solely for the Convening Authority while accomplishing the requirements outlined in Chapters 6, 7, and 8 of this instruction.

**2.16. The Program Offices will:** Analyze (for Class A and B mishaps involving the system(s) they are responsible for) the hazards that contributed to the mishap and recommend material risk mitigation measures, especially those that can minimize potential human errors.

**2.17. The Installation Fire Chief will:** Determine the most probable cause for Class C fire-related mishaps. **(T-2)** However, for Class A and B fire-related mishaps, Safety Investigation Board Presidents will coordinate fire-related probable cause assessments through Command Fire Emergency Services (FES) staffs. **(T-2)** Any time FES tactics or competency is at issue, the Convening Authority will request investigative support from the Command FES staff. **(T-2)**

**2.18. The Security Forces Commander or AF Office of Special Investigations will:** Provide minimum mandatory data to the installation safety office to complete Occupational Safety and Health Administration recordkeeping requirements for all workplace violence acts. **(T-1)**

**2.19. Public Health Offices will:** Ensure, in accordance with AFI 48-145, *Occupational and Environmental Health Program*, occupational and environmental illnesses reported to Public Health are investigated and reports are closed within 30 days. **(T-1)** **(Exception:** Reportable hearing loss investigations in the AF Safety Automated System will be closed within 7 calendar days of the confirmed permanent threshold shift. Public Health will report, monitor, and track occupational illness investigations until completion via the AF Safety Automated System Occupational Illness Module. **(T-1))** After the medical provider makes the final determination on the illness report, and prior to closing an investigation, Public Health will review each illness record to ensure internal (within individual report) and external (compared with other similar illness reports) consistency and that quality data has been captured and documented. **(T-1)** Public Health will forward recordable occupational illness information on the Occupational Safety and Health Administration Form 300, *Log of Work-Related Injuries and Illnesses*, via the AF Safety Automated System within 7 calendar days of provider determination of occupationally-related. **(T-1)** Illness reports which are closed as occupationally-related illnesses are automatically included on the Occupational Safety and Health Administration Form 300.

## Chapter 3

### GENERAL INFORMATION

**3.1. Accounting for Losses, Costs, and Occupational Illness/Injury.** The AF records each mishap to the Command 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 “USAF 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. Mishap accounting in no way implies blame or mishap responsibility.

3.1.1. For all engine-confined domestic object damage mishaps, the accounting organization in the AF Safety Automated System will be “USAF At Large.”

3.1.2. Record a military or civilian injury/loss to the Command the individual is assigned to at the time of a mishap. Use military personnel data records and civilian payroll records to make determinations. ARC personnel who are activated under Title 10 of the US Code are accounted to their parent unit.

3.1.3. Record a mishap occurring to an individual in any permanent change of station status to the losing Command until the individual signs in at the new duty station. The “transfer effective date” is not criteria for determining the unit of assignment.

3.1.4. Record a mishap involving an individual in permanent change of station status with temporary duty (TDY) pending further orders to the organization originating the initial orders until the individual signs in at the next permanent duty station.

3.1.5. The accounting organization in the AF Safety Automated System for mishaps involving foreign exchange students and military members in non-pay status while awaiting an appellate review (appellate leave) or court martial will be the “USAF At Large”. For mishap reporting purposes, personnel in a non-pay status are returned to active duty when notified (written or verbal) to return to an AF installation.

3.1.6. When a unit makes an AF Government Motor Vehicle or Government Vehicle, Other available to another unit on a recurring or permanent dispatch, the using organization is the owning command. Vehicles assigned to non-appropriated funded organizations are not considered Government Motor Vehicle or Government Vehicle, Other. 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 Government Motor Vehicles.

3.1.7. For all mishaps and incidents, ensure the unit’s/member’s home station safety office (and deployed safety representative, if applicable) is notified and receives all pertinent information as soon as possible.

3.1.8. The accounting organization is the unit of assignment of the asset damaged or personnel injured in the mishap. For aircraft mishaps, see AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*, or consult the Command Aerial Vehicle Distribution Officer.

**3.2. Mishap Costs.** See DoDI 6055.07 for detailed costing information and see below for how to determine mishap costs.

3.2.1. Materiel Costs.

3.2.1.1. Field-level repair. If repaired locally, calculate the actual cost of the materiel used to repair the item.

3.2.1.2. Depot-level repair. Contact the Logistics Readiness Squadron Materiel Management Customer Support Section to obtain the exchange cost for each stock listed item requiring depot-level repair from the AF Master Item Identification Data Base. If the item is not stock listed, contact the program manager. If the sum total of the exchange cost is equal to or greater than \$500,000, 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 the AF Master Item Identification Data Base. If the sum total of the exchange cost is less than \$500,000 report this cost. **Exception:** If the sum total of the exchange costs for foreign object damage is equal to or greater than \$500,000, a depot/repair facility estimated cost based on field damage description may be reported.

3.2.2. Labor Costs. Obtain the labor cost hourly rate from the AF Safety Center Portal website or contact the AF Safety Center technical support for assistance.

3.2.2.1. Field-level. Calculate by multiplying number of hours of DoD military and civilian personnel times the field-level hourly rate.

3.2.2.2. Depot-level. Calculate by multiplying number of hours of labor to repair times the depot-level hourly rate.

3.2.3. Contractor repairs (both field- and depot-level). Use the actual cost charged to the government for repairs performed by contractors. If the contractor considers itemized costs to be proprietary information, request and report only the sum total. Contact the Program Manager for assistance in obtaining contractor repair costs.

3.2.4. Destroyed Assets.

3.2.4.1. Determining destroyed conventional aircraft or remotely piloted aircraft/unmanned aerial system cost. If the aircraft/remotely piloted aircraft/unmanned aerial system is destroyed, obtain flyaway cost from AFI 65-503, *US Air Force Cost and Planning Factors*, Table A10-1: "Unit Flyaway Costs". If assistance is required and the requestor does not have access to the AF Portal, e-mail the AF Cost Analysis Agency Workflow at [usaf.pentagon.saf-fm.mbx.afcaa-fma-workflow@mail.mil](mailto:usaf.pentagon.saf-fm.mbx.afcaa-fma-workflow@mail.mil), or contact the AF Cost Analysis Agency at DSN 612-5565 / Commercial (240) 612-5565. Contact the Program Manager to get the cost of all modifications done to the aircraft/remotely piloted aircraft/unmanned aerial system up to the mishap date. An aircraft/remotely piloted aircraft/unmanned aerial system that is damaged but will not be repaired is not automatically a destroyed aircraft/remotely piloted aircraft/unmanned aerial system. In this case, calculate repair cost in accordance with paragraphs 3.2.1.1 and/or 3.2.1.2.

3.2.4.2. Other destroyed or lost assets with no item to exchange. Use the standard (unit) cost from the AF Master Item Identification Data Base or the program manager. To

access to the AF Master Item Identification Data Base, contact the Logistics Readiness Squadron Materiel Management Customer Support Section.

3.2.4.3. Determining Costs to Non-DoD Property Damage. If AF operations result in damage of non-DoD property, calculate and report the damage cost. Determine non-DoD property damage costs using official estimates from agencies such as, but not limited to, logistics readiness offices or licensed/credentialed estimators.

3.2.4.4. Determining Environmental Clean-Up Costs. Obtain these costs from the local civil engineering environmental section. The end cost of this type of cleanup may not be available inside the normal investigation timeframe. Use the best estimate available at the time of the final message. Environmental clean-up costs include costs for cleanup, environmental decontamination, and restoration of private and government property.

**3.3. Acting on Critical Safety Information.** If a Safety Investigation Board discovers information that seriously impacts the safe operation of a weapons system, they must immediately notify the Convening Authority, and potentially the unit commander, regardless of whether such information is associated with the mishap currently under investigation. Convening Authority safety offices will take action in accordance with paragraph 2.6.7. **(T-1)**

**3.4. Recording Occupational Injuries and Illnesses.**

3.4.1. Executive Order 12196, *Occupational Safety and Health Program for Federal Employees*, requires federal agencies to report occupational mishaps to the Secretary of Labor, Title 29 CFR 1960, *Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters* and 29 CFR 1904 sets requirements and provides standard forms for documenting occupational illnesses and injuries. **(T-0)**

3.4.2. The appropriate occupational safety staff will investigate, record and report all Class A - C mishaps and work-related Class D mishaps. The host occupational safety staff is the official AF office of record for maintaining occupational illness and injury data and maintains consolidated records of injuries and illnesses. The AF Safety Automated System will be used to generate an Occupational Safety and Health Administration Form 300 for mishaps involving injury and illnesses to on-duty civilian personnel. The installation commander is responsible for examining and signing the annual civilian Occupational Safety and Health Administration Form 300A, *Summary of Work-Related Injuries and Illnesses*, for the Occupational Safety and Health Administration establishment delineated in the AF Safety Automated System no later than 1 February each year. This task may be delegated to vice commander or executive director. **(T-0)**

3.4.3. Safety will record Class A - D occupational injuries, and Public Health will record occupational illnesses in the AF Safety Automated System within 7 calendar days of receiving information that a reportable/recordable injury or illness has occurred. **(T-1)** At a minimum, prior to day seven, minimum data fields as required by the AF Safety Automated System will be completed and a Preliminary Message released to populate the Occupational Safety and Health Administration 300 in accordance with 29 CFR 1904.29(b)(3). **(T-1)**

3.4.3.1. Illnesses require an investigation and final determination by a provider before they are confirmed occupational illnesses. Once confirmed, the case should be closed and recorded within 7 calendar days in the AF Safety Automated System. **(T-1)** Public Health generally reports only occupational illnesses; however, Public Health will report

thermal illnesses and injuries in accordance with AFI 48-151, *Thermal Injury and Prevention Program*. (T-0)

3.4.3.2. The Medical Treatment Facility will provide injury data to the host safety office on a routine basis as information is discovered. (T-1)

3.4.3.3. A needle stick or sharps injury, when caused by a contaminated sharp, will be reported in accordance with the discipline-specific safety manual and entered into the AF Safety Automated System by safety personnel. If an illness is diagnosed then the mishap will be transferred to the AF Safety Automated System Occupational Illness module.

3.4.4. Typically, by using the AF Safety Automated System, the host occupational safety office satisfies Occupational Safety and Health Administration requirements for single-point access to occupational illness and injury cases. (T-0) Host safety staffs will ensure host-tenant agreements between host and tenant units defines complete mishap identification, investigation and reporting processes in accordance with this AFI. (T-1) This includes having formal agreements between the host occupational safety office at AF-led Joint Bases and all tenant units, regardless of the service component.

3.4.5. Contractor Employees.

3.4.5.1. Under the contractor's day-to-day supervision. The contractor, not the AF, will be responsible for reporting contractor injuries and illnesses to the Occupational Safety and Health Administration, even if the contractor's employees are co-located with an AF organization.

3.4.5.2. Under the AF's day-to-day supervision. The AF will be responsible for reporting injuries of these contractor employees.

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

3.4.6. Occupational Safety and Health Administration Form 300A. The installation commander will sign the Occupational Safety and Health Administration Form 300A certifying he/she has examined the Occupational Safety and Health Administration Form 300 log. The host installation safety office will ensure the posting of the signed Occupational Safety and Health Administration Form 300A on or before 1 February each year, using information recorded from the Occupational Safety and Health Administration Form 300 log, which reflects civilian occupational injury and illness cases of all host units and tenant units. The Occupational Safety and Administration Form 300A must be posted in conspicuous locations and remain in place until 30 April. (T-0)

### 3.5. Obtaining and Using Health Information.

3.5.1. Health Insurance Portability and Accountability Act of 1996 . DoD 6025.18-R, *Department of Defense Health Information Privacy Regulation*, implements Public Law 104-191, *Health Insurance Portability and Accountability Act*, within the DoD. DoDI 6055.07 governs the protection, use, and release of safety records. Mishap investigation and reporting requires acquisition of Health Insurance Portability and Accountability Act-protected health information from the medical community. Safety officials at all levels are responsible for establishing a liaison with installation medical agencies to ensure an information flow has been established.

3.5.2. The requirement to comply with the Health Insurance Portability and Accountability Act applies only to individuals or organizations meeting the definition of a covered entity. A covered entity may use or disclose protected health information as authorized by the individual to whom the information pertains, or as otherwise permitted by DoD 6025.18-R. The Health Insurance Portability and Accountability Act does not preclude an employee from providing medical information to their supervisor, management, or the installation Compensation Program Administrator. For questions on medical information release, medical and administrative personnel acting as covered entities should consult DoD 6025.18-R paragraph DL1.1.31, AFI 41-210, *Tricare Operations and Patient Administration Functions*, and the servicing Medical Law Consultant.

3.5.3. The Safety Investigation Board process and members, to include appointed medical members and human factors additional members, function under the auspices of this AFI and are not covered entities under the Health Insurance Portability and Accountability Act. When the Safety Investigation Board receives health information from a covered entity the information ceases to be protected by the Health Insurance Portability and Accountability Act, but remains subject to the Privacy Act as sensitive personally identifiable information. The Safety Investigation Board shall protect personally identifiable information with prudent safeguards to prevent unauthorized release. Medical personnel assigned to the Safety Investigation Board shall inform interviewees that the Health Insurance Portability and Accountability Act does not apply, but that safeguards are in place to protect personally identifiable information.

3.5.4. Because all appointed Safety Investigation Board members deliberate on all findings and recommendations, all may require access to relevant medical information. Because the Accident Investigation Board report is the Board President's alone, not all Accident Investigation Board members will require access. Consider this when transferring non-privileged health information to the Accident Investigation Board. Safety personnel should consult the AF Safety Center Judge Advocate (AFSEC/JA) or the AF Safety Center Human Factors Division (AFSEC/SEH) for questions on release of health information.

3.5.5. The AF Personnel Center Injury Compensation Office located at Randolph AFB, Texas services all injury compensation claims for federal civilian employees (active, separated, retired or deceased). For all new traumatic injury or occupational disease/illness claims received by the AF Personnel Center Injury Compensation Office, an Occupational Safety and Health Administration Form 301, *Injury and Illness Incident Report*, is automatically generated electronically in the Employee's Compensation Operations & Management Portal to the Occupational Safety and Health Administration Record-keeper for the employee's host installation safety office. For non-appropriated fund AF employee occupational injuries and illnesses, a copy of the related Department of Labor Forms LS-1, *Request for Examination and/or Treatment*, LS-201, *Notice of Employee's Injury of Death*, or LS-202, *Employer's First Report of Injury or Occupational Illness*, will be provided by the applicable Human Resources Office to the host installation safety office within five days of the forms being submitted. Reports received from the AF Personnel Center Injury Compensation and Human Resources Office will be considered initial notification of potential occupational injuries and illnesses and will be used to initiate warranted investigative actions. **(T-1)** Do not delay investigation and reporting actions while waiting for an AF Form 978, *Supervisor Mishap Report*.

## Chapter 4

### PRIVILEGED SAFETY INFORMATION

**4.1. General Information.** Safety privilege is based on a national defense need for rapid and accurate assessment of the causes of mishaps to prevent a recurrence and maintain mission readiness. This privilege creates restrictions on handling and releasing information in safety investigation reports.

**4.2. Reports that Contain Safety Privilege.** Class A – E mishap reports, Nuclear Surety reports and some safety studies contain privileged safety information, but not all information in these reports is privileged. In addition, Ground category Industrial and Occupational, and Weapons category Explosive and Chemical Agent safety reports for mishaps that occurred before 3 October 2000 do not contain privileged safety information (see paragraph 4.11).

**4.3. Identifying Privileged Safety Information.** Privileged safety information refers to information that is exempt by case law from disclosure outside the DoD Safety Community. The DoD Safety Community consists of DoD personnel and certain DoD contractors with a specific need to know particular information exclusively for the prevention of DoD mishaps. The military safety privilege is judicially recognized and protects the investigative process and promises of confidentiality. The AF treats this information as limited use/limited access. Safety privilege assures commanders obtain critical information expeditiously during a safety investigation and ensures that completed final reports are protected, thereby proactively promoting safety, and preserving combat readiness and mission accomplishment. Privileged safety information includes:

4.3.1. Analysis, findings, conclusions, causes, recommendations, other findings and recommendations of significance, and the deliberative process of safety investigators. Diagrams and exhibits are privileged if they contain information which depicts the analysis of safety investigators. This includes draft versions of the above material and notes (see paragraph 4.2 for exceptions).

4.3.2. Information given to safety investigators pursuant to a promise of confidentiality and any information derived from that information to include direct or indirect references to that information (see paragraph 4.5 for promise of confidentiality).

4.3.3. Computer-generated animations, simulations, or simulator reenactments in which safety investigator analysis or confidential witness statements are incorporated. Animations made exclusively from recorder data (including Military Flight Operations Quality Assurance data) are not privileged. Although not privileged, actual intra-cockpit voice communication has legal protection as private communication and any request for access must be coordinated through legal channels. Requests to any safety office for intra-cockpit voice communications should be directed to the AFSEC/JA.

4.3.4. Photographs, imagery, and animations that reveal the deliberative process or analysis of the board, including photographs with markings. However, photographs depicting a measuring device or object contrasted against mishap evidence for the sole purpose of demonstrating the size or scale of the evidence are not considered privileged safety information.

4.3.5. Life sciences material that contain analysis by a safety or life sciences investigator. Seventy-two-hour histories, 7-day histories and interview narratives are only privileged if a promise of confidentiality was granted.

**4.4. Prohibited Uses of Privileged Safety Reports and Information.** Privileged safety information may only be released as provided elsewhere in this instruction or upon specific authorization by the Secretary of Defense. Part 2 of formal safety reports, status and final safety messages, and any other reports or documents containing privileged safety information may only be used for specific mishap prevention purposes. Failure by military members to obey this paragraph is a violation of Article 92 of the UCMJ, and failure by DoD civilian employees may result in disciplinary action.

4.4.1. AF 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.

4.4.2. The AF 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/reviews, to determine liability of anyone or liability in claims for or against the US, or in any other manner as part of any action by or against the US.

4.4.2.1. Adverse administrative actions include, but are not limited to, letters of reprimand, counseling, or admonishment, referral enlisted and officer performance reports, 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 may only use other sources of information which are not privileged to take punitive or adverse administrative actions.

4.4.2.2. 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, *Aerospace and Ground Accident Investigations*, other legal investigations, safety mishap participant interviews when promises of confidentiality are not authorized (Article 31, UCMJ, rights advisement may be necessary), Security Forces and/or the AF Office of Special Investigation information gathered for criminal matters. Consult your local Judge Advocate for further guidance on the use of information from legal investigations.

4.4.2.3. The AF will not release privileged safety information in response to Freedom of Information Act (FOIA) requests.

4.4.3. Controlling and Handling Safety Reports and Information. Personnel having access (both authorized and 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 in accordance with the AF Records Disposition Schedule. Use AF Visual Aid, 91-



218, *Privileged Safety Information (PSA) Cover Sheet*, as a means to protect privileged safety information in hardcopy form.

4.4.3.1. All requests for release of safety reports and information outside of AF safety channels will be immediately forwarded to AFSEC/JA. **Exception:** Transfer of information to a corresponding legal investigation upon completion of a safety investigation.

4.4.3.2. All persons (except the Convening Authority, his/her staff, safety office staff, and AF Safety Center personnel) given or provided access to privileged safety information by the Interim Safety Board or the Safety Investigation Board prior to the Convening Authority briefing must agree to and sign the appropriate safety privilege agreements. These agreements include: **Non-Disclosure Agreement-Safety Investigation, Non-Disclosure Agreement-Contractor Representative, or Privileged Witness Agreement** on file with the Interim Safety Board or Safety Investigation Board. Use the templates located in the AF Safety Automated System Pubs & Refs.

#### 4.5. Promise of Confidentiality.

4.5.1. Purpose. The AF gives a promise of confidentiality to encourage frank and open communication 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.

4.5.2. Promises of Confidentiality Authorized. Promises of confidentiality are only authorized in investigations of AF nuclear surety, space, aviation, guided missile, directed energy, and friendly fire mishaps.

4.5.2.1. Promises of Confidentiality Not Authorized. Promises of confidentiality are not authorized for explosives, small arms, chemical agents, afloat, ground, motor vehicle, off-duty military mishaps, incidents, and hazards.

4.5.2.2. During the investigation of a mishap outside of the categories described in paragraph 4.5.2, but involving complex systems, military-unique equipment, operations or exercises, there may be occasions when a critical witness or involved contractor will not provide a statement or information without a promise of confidentiality. This exception may only be approved by the AF/SE or the AF Safety Center Vice Commander (AFSEC/CV). All requests for exception should be forwarded through the AF Safety Center Occupational Safety Division (AFSEC/SEG) and the AFSEC/JA to AF/SE or AFSEC/CV for action.

4.5.3. Persons Authorized to Offer Promises of Confidentiality. Only the Interim Safety Board President, Interim Safety Board Investigating Officer, Safety Investigation Board President, Safety Investigation Board Investigating Officer, or a Single Investigating Officer 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 Safety Investigation Board President/Single Investigating Officer and Investigating Officer have the sole discretion to decide who will be

offered a promise of confidentiality. The decision should be based upon a witness or contractor's reluctance to cooperate or apparent self-interest in not disclosing information. The Safety and Interim Safety Investigation Board President may authorize other board members to extend an approved offer of a promise of confidentiality in the Safety and Interim Safety Investigation Board President's and Investigating Officer's absence.

4.5.4. Persons to Whom Promises of Confidentiality May be Offered. May be given to any witness, however, will only be given as needed to ensure forthright cooperation and may not be given on a blanket basis to all witnesses.

4.5.5. 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) or other legal investigations and/or may be releasable to the public pursuant to a FOIA request. Consult the Host Installation Staff Judge Advocate or a labor relations officer for guidance before interviewing any federal civilian employees covered by a bargaining unit.

#### 4.6. Marking and Documenting Safety Information.

4.6.1. The cover and individual pages of documents containing privileged safety information will be clearly marked with the privileged warning statement. All media containing privileged safety information (audiotapes, videotapes, animations, simulations, computer generated profiles, etc.) will be clearly marked with the warning statement. Part 1 (Factual Information) of a formal report will not be marked with the privileged warning statement.

4.6.2. Safety reports are For Official Use Only (FOUO) in accordance with, Department of Defense Manual (DoDM) 5200.01, Volume 4, *Department of Defense Information Security Program: Controlled Unclassified Information (CUI)*. However, not every document in the report is FOUO. Most 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 the FOIA, the Privacy Act, Export Control laws, or because they contain personal identifiable information , or proprietary information from a contractor.

4.6.3. Promises of Confidentiality (Witness and Contractor Personnel). If a promise of confidentiality is offered and accepted, it must be documented by either a signed **Privileged Witness Agreement** or a signed **Non-Disclosure Agreement-Contractor Representative** as applicable. Read, record, and transcribe the **Privileged Witness Interview Script** for recorded interviews of witnesses. Use the templates located in the AF Safety Automated System Pubs & Refs.

4.6.4. Non-privileged Witness Statements. If no promise of confidentiality was made, include a signed **Non-Privileged Witness Agreement** with the statement. Read, record, and transcribe the **Non-Privileged Witness Interview Script** for recorded interviews of witnesses. Use the templates located in the AF Safety Automated System Pubs & Refs.

#### 4.7. Transmitting Safety Information.

4.7.1. To protect the privileged status and to ensure the correct handling of safety reports, originating organizations will use the AF Safety Automated System reporting system

combined access card-enabled system that ensures the protection of privileged safety information. When transmitting or sharing privileged safety information outside of the AF Safety Automated System follow the below procedures:

4.7.1.1. Ensure no privileged information is included in the subject or body of the e-mail.

4.7.1.2. Annotate safety reports and messages or portions of reports and messages as FOUO following paragraph 4.6.2 guidance, save as a password-protected document, and send encrypted.

4.7.1.3. Send the applicable password in a separate message or by another mode of transmission.

4.7.1.4. If neither the AF Safety Automated System nor e-mail are available for transmission, a FAX may be used. Follow the labeling procedures described above. Take precautions to ensure the recipient will stand by to receive the FAX immediately upon receipt and verify receipt once transmitted.

4.7.1.5. For transmitting large files, transmission via secured, combined access card-enabled systems such as the US Army Aviation and Missile Research, Development, and Engineering Center Safe Access File Exchange (<https://safe.amrdec.army.mil>) is acceptable utilizing password-protected documents.

4.7.2. Classified Mishap Reporting, Weapons Safety Investigations and Reports. Submit all classified mishap reports (e.g. DULL SWORD, BROKEN ARROW) via SIPR or other appropriate classified transmission method for mishap reporting, tracking, and prevention to the appropriate office for coordination and dissemination (see paragraph 7.5). Submit unclassified portions of the mishap report in the AF Safety Automated System as appropriate.

**4.8. Authorized Use and Release of Privileged Safety Reports and Information.** In order to ensure courts honor the assertion of privilege, and DoD personnel maintain confidence in the limited use of privileged safety information, the rules described in this paragraph must be followed meticulously.

4.8.1. Ensuring Use is For Mishap Prevention Only. While unique circumstances described in paragraphs below authorize designated individuals to release privileged safety information outside the AF, that information remains AF property. Questions regarding access to privileged safety information should be referred to AFSEC/JA. If an agency outside the AF needs a copy of any safety related documents for mishap prevention, corrective actions or other purpose, regardless of whether they are privileged, coordinate through AFSEC/JA and the AF Safety Center specific discipline before releasing statements to the requestor. Access is limited to information that is necessary for and consistent with mishap prevention. Whenever privileged safety information is requested, first determine whether mishap prevention goals can be met by sanitizing the information. If the answer is no, then provide only the necessary information to the authorized persons or agencies with the restrictive markings affixed.

4.8.2. Sanitizing Privileged Safety Reports. Sanitizing reports or extracts from reports requires completely 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. Some mishaps,

because of widespread publicity or unique circumstances, cannot be adequately sanitized. After a report has been sanitized, the remaining portions of the findings, causes, recommendations, conclusions, or opinions of the investigation are no longer privileged. Remove identifying information and markings identifying the documents as privileged or FOUO before reproducing sanitized reports or extracts of reports. Sanitized reports are not necessarily releasable to the public since they may still contain personally identifiable information, contractor proprietary information, or information protected by the Freedom of Information Act, Privacy Act, Arms Export Control Act, or Export Administration Act. Do not release witness statements or contractor reports provided under a promise of confidentiality. To sanitize a report, remove the following information:

4.8.2.1. Date and location of the mishap.

4.8.2.2. Aircraft, remotely piloted aircraft/unmanned aerial system, missile, vehicle, or weapon serial number.

4.8.2.3. Names, social security numbers, and other personal identifying information of participants, witnesses, and investigators.

4.8.2.4. Any other detail that directly, indirectly, or in aggregate identifies the mishap or any individual who has given information pursuant to a promise of confidentiality.

4.8.3. Limiting Release within the AF. AF personnel assigned to Safety positions access and use privileged safety information solely for mishap prevention purposes. Directors/Chiefs of Safety may, within their organization, provide privileged safety information (excluding confidential witness statements or contractor reports) to other AF officials within their organization when those officials' duties include mishap prevention and when necessary to implement safety investigation recommendations or develop, take, or review preventive actions, when sanitized information is inadequate, on a need-to-know basis and solely for mishap prevention. They will ensure members are instructed on properly protecting information, are made aware of their responsibilities to prevent unauthorized release, and have signed a **Non-Disclosure Agreement-Safety Investigation**. Use the templates located in AF Safety Automated System Pubs & Refs section.

4.8.3.1. Each organizational safety staff will be responsible for determining and granting AF Safety Automated System accounts with access to privileged data for personnel within their own organization. Safety staffs will ensure that those granted these accounts fully understand the handling and protection of privileged information and maintain documentation of annual privileged training for each account holder. Account access will be limited to mishap prevention purposes. Medical personnel who only need access to the Occupational Illness module request an AF Safety Automated System account through their public health office.

4.8.3.2. Accident Investigation Board 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 Accident Investigation Board report. Accident Investigation Board investigators must first coordinate with the Convening Authority, Convening Authority Judge Advocate and Convening Authority Director/Chief of Safety if the Accident Investigation Board 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.

4.8.3.3. Part 1 of the two-part formal safety report and all other non-privileged factual information is given to the Accident Investigation Board President in its entirety (see paragraph 6.14 and the discipline-specific safety manual).

4.8.3.4. Other AF Offices or Agencies. Privileged safety information should not be released to other AF Offices or Agencies unless the Convening Authority determines there is a clearly identified role for these Offices or Agencies in mishap prevention. The privileged safety information must not be revealed to any other investigation or used to support any legal proceedings or punitive actions resulting from the mishap in order to maintain a clear separation between safety investigations and any legal investigations or proceedings which may result from an accident or mishap.

4.8.3.4.1. AF personnel who receive privileged safety information related to a safety investigation resulting from a mishap will not communicate privileged safety information directly or indirectly with any other non-safety investigation or board related to the mishap.

4.8.3.4.2. If judge advocate personnel receive privileged safety information, they will only use that information to ensure no other investigation or board receives or uses that information in contravention of AF and DoD guidance.

4.8.4. Limiting Release Outside the AF. In certain cases, the AF has agreed to exchange privileged safety information with other DoD agencies solely for mishap prevention purposes. Also, the AF shares certain non-privileged mishap prevention information with other entities in the interests of the general safety community. Contact AFSEC/JA for approval to release except where specifically delegated elsewhere below.

4.8.4.1. Responding to Subpoenas and Legal Process (discovery requests, subpoenas, court orders, depositions, or other legal processes except as provided in paragraph 4.14).

4.8.4.2. FOIA Requests. The AF Safety Center Commander (AFSEC/CC) and AFSEC/CV are the only release and denial authority for AF safety records. All FOIA requests must be submitted or transferred to AFSEC/JA via e-FOIA. Release authority for “no records” responses and full releases (i.e., when a request is only for particular non-privileged information, or specifically excludes information which would be withheld under a Freedom of Information Exemption) is delegated to AFSEC/JA.

4.8.4.3. Historical Safety Reports. The AFSEC/CC or AFSEC/CV may release the findings portion only (not analysis, conclusions, recommendations, or witness statements, etc.) of a Safety Board, contained in historical safety reports prepared in accordance with DoDI 6055.07 (or its predecessors), provided no national defense or safety interest exists.

4.8.4.4. Contractors. Contractors may need access to privileged safety information when they are performing an AF function involving mishap prevention. Contractors may also need access to privileged safety information if they designed, built, maintained, or operated AF weapon systems, their components, or other AF equipment, in order to implement Safety Investigation Board recommendations which will correct defects or other problems and help prevent future mishaps. When contractors need access to

privileged safety information either the **Non-Disclosure Agreement-Safety Investigation** or the **Non-Disclosure Agreement-Contractor Representative** must be signed and stored at the safety office. Use the templates located in the AF Safety Automated System Pubs & Refs section.

4.8.4.4.1. Access will be limited to what is needed to prevent future mishaps or implement applicable Safety Investigation Board recommendations and shall be strictly limited to only those individuals who have a need to know the information in order to enhance the safety of the AF weapon system or implement Safety Investigation Board recommendations. Under no circumstances shall an AF contractor not working in direct support of a safety investigation have access to information given to a safety investigator pursuant to a promise of confidentiality or to any direct references to that information or to any information that could be used to identify the source who provided the information. Privileged safety information will not be released to any general counsel's office or public relations personnel. After a project is complete, contractors will not maintain the information in their files and will ensure all items are destroyed.

4.8.4.4.2. Contractors who built, designed, or maintained equipment involved in mishaps may send representatives to support AF Safety Investigation Boards at the request of the AF. Safety Investigation Board Presidents and safety investigators will ensure those representatives understand that the AF may promise confidentiality to the contractor representatives to the Safety Investigation Board when the AF collects and maintains sole possession or control over documents provided to the board. The Safety Investigation Board President grants these contractor representatives access to privileged safety information only if it is essential to assist the Safety Investigation Board. Contractor employees may not keep notes or other documents that contain privileged safety information. Notes, documents, and other material produced during the Safety Investigation Board investigation by the contractor that do not contain or reflect any safety board analysis may be retained by the contractor representatives.

4.8.4.4.3. Contractors providing weapon system maintenance support are performing an AF function. The Wing, NAF, Command Director/Chief of Safety, AF Safety Center division chief, AFSEC/CV, AFSEC/JA, or AF/SE may provide the contractors safety information for their specific AF safety purposes.

4.8.4.4.4. AF operations conducted at contractors' facilities require privileged safety information handling.

4.8.4.4.5. Contractors providing weapon system crew training are performing an AF function, and need privileged safety information from safety reports, videos, and other similar media to build training scenarios. The Wing, NAF, Command Director/Chief of Safety, or the AF Safety Center may provide the contractors privileged safety reports for this function.

4.8.4.4.6. Contractors who instruct safety programs in mishap investigation or safety program management contracted by the AF or ARC require access to privileged safety information. The Wing, NAF, Command Director/Chief of Safety, AF Safety Center division chief, AFSEC/CV, AFSEC/JA, or AF/SE may provide the contractors safety reports for this function.

- 4.8.4.4.7. Contractors who build, design, maintain, or operate AF weapon systems, their components, or other AF equipment may need privileged safety information to correct defects or other problems and prevent future mishaps. The Wing, NAF, Command Director/Chief of Safety, System Program Office safety officer or equivalent, or AF/SE or AFSEC/CV may provide contractors privileged and/or non-privileged safety information for this function. This includes Space System Contractors, Space Technical Support Contractors, Advisory & Assistance Services, and Federally Funded Research & Development Centers when they are performing an AF function.
- 4.8.4.4.8. Contractors performing AF safety functions may require privileged safety information. Wing, NAF, Command Director/Chief of Safety, or AFSEC/JA may authorize access to privileged safety information for this function.
- 4.8.4.4.9. Any other release of privileged safety information to contractors must first be approved by the AF/SE or AFSEC/CV.
- 4.8.4.5. Limiting Release to Other Services and DoD Agencies. Approval authority for exchanging formal safety reports with other military services is the AF/SE, AFSEC/CV or AFSEC/JA. Other US military services and DoD agencies responsible for flying, supporting or maintaining AF aircraft may request privileged safety information when needed for mishap prevention. 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.
- 4.8.4.6. 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 and DoD Directive (DoDD) 5530.3, *International Agreements*. Release of safety information to North Atlantic Treaty Organization (NATO) military organizations is governed by NATO Standardized Agreement 3101, *Exchange of Safety Information Concerning Aircraft and Missiles*, and 3531, *Safety Investigation and Reporting of Accident/Incidents Involving Military Aircraft, Missiles, And/Or UAVs*.
- 4.8.4.6.1. 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 and under the command of DoD Components are defined as DoD military personnel by DoDI 6055.07. Foreign nationals in student status are not authorized access to privileged safety information.
- 4.8.4.6.2. Comparable persons and offices within European Participating Air Forces countries may have access to certain limited 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 US. The release authority is the AF/SE. This information is for mishap prevention purposes only.
- 4.8.4.7. Limiting Release of Nuclear Safety Reports to Agencies outside the AF. The 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; and operations offices or authorized contractors of the Department of Energy. The Command

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 major command 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 AF releases this information only to reach its nuclear surety goals.

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

4.8.4.9. Limiting Release to the National Aeronautics and Space Administration and National Reconnaissance Office. Space safety reports may be distributed to the National Aeronautics and Space Administration and the National Reconnaissance Office in accordance with AFI 91-206 and applicable memorandum of understandings.

4.8.4.10. Sharing privileged safety information with non-DoD US Government Agencies. The AF/SE may establish reciprocal formal agreements for exchanging relevant safety information with other federal agencies regarding similar airframes or systems for mishap prevention purposes when access to those Agency reports may benefit DoD mishap prevention efforts, but only where adequate protection of privileged safety information exists to maintain the safety privilege, and where the recipient agency agrees to provide similar safety information to the AF. All such reciprocal agreements must meet the requirements of DoDI 6055.07. Whenever appropriate the AF should share non-privileged safety information such as aggregate data or sanitized reports in lieu of privileged reports.

**4.9. Authorized Use and Release of Non-Privileged Safety Reports and Information.** Safety Reports may contain non-privileged safety information (e.g. Part 1 of Class A and B Aviation Safety Reports) and some reports may be non-privileged in their entirety. The purpose of these reports is mishap prevention. These reports can be released outside the AF safety community and outside the AF once protected information, such as FOIA protected information, Privacy Act, Export Control laws, and contractor's proprietary information, and findings and recommendations are removed.

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

4.9.2. When release will be made outside the AF, AFSEC/JA or their delegated representative is the release authority. AF Safety Center personnel or the installation Chief of Safety is the release authority for providing these reports to other AF personnel. The reports may not be used for any purpose other than mishap prevention, but the evidence supporting them may be used by other, legal, investigations.

4.9.3. To control reports, do not retain copies at the local level. Access to non-privileged reports will be through the AF Safety Automated System, and all copies will be destroyed when no longer needed for mishap prevention purposes.



**4.10. Accessing, Handling, & Distributing the Formal Report.** Individuals may submit a request to access Tabs of the Safety Investigation Report to AFSEC/JA via the AF Safety Automated System. Tabs may be reviewed online, printed, or downloaded. If printed or downloaded, the information must be protected accordingly. Printed and downloaded copies must be destroyed/deleted when no longer needed for mishap prevention purposes. Do not provide copies or extracts to any organization or agency outside the AF. Instead, refer requests to AFSEC/JA. Do not produce "information only" copies of formal reports; however, the Safety Investigation Board President may retain a copy of the formal report until all briefings have been provided. At that time, the retained copy must be deleted/destroyed. Questions about accessing, handling and distributing safety information and formal reports should be referred to AFSEC/JA.

**4.11. Handling and Disclosing Reports on Ground and Industrial, and Explosives and Chemical Agents mishaps that occurred before 3 October 2000.**

4.11.1. Ground and Industrial, Explosives, and Chemical Agents mishap investigations were not considered privileged under the version of DoDI 6055.07 in effect before this date, but were still conducted solely for 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 DoDM 5400.07, *DoD Freedom of Information ACT (FOIA) Program*, requirements.

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

4.11.3. These reports can be released outside the AF safety community and outside the AF once protected information, including Privacy Act information, findings, and recommendations are removed. When release will be made outside the AF, AFSEC/JA is the release authority. The installation Chief of Safety is the release authority for providing these reports to other AF 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 AF claims personnel to assist them in evaluating claims for damages filed against the AF.

4.11.4. To control reports retain only one copy of each safety report at wing or base, intermediate command, and Command safety offices. AF 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 solely for mishap prevention purposes. Refer all requests for release to AFSEC/JA.

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

**4.12. Technical Orders and Time Compliance Technical Orders.** Technical Orders and Time Compliance Technical Orders, including maintenance manuals and flights manuals, are usually limited release documents. They are often protected by Section 38 of the Arms Export Control Act (22 USC. 2778); the Export Administration Act of 1979 (50 USC app. 2401-2420); or the International Emergency Economic Powers Act (50 USC 1701-1706).

**4.13. Actual or Potential Compromise of Privileged Safety Information.**

4.13.1. It is AF 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.

4.13.1.1. Suspected instances of unauthorized public disclosure of privileged safety information shall be reported promptly and investigated by the appropriate commander to determine the nature and circumstances of the unauthorized disclosure, the extent of the disclosure, any ramifications on protecting it from further release, and the corrective and disciplinary action to be taken. AFSEC/JA will advise any investigation directed.

4.13.1.2. 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 (see paragraph 4.8).

4.13.2. Reporting and Notifications. Personnel who learn of an unauthorized release of privileged safety information should immediately report it to their Command safety office, who will in turn report the incident to AFSEC/JA. AFSEC/JA will notify the appropriate commander, directly or through the commander's servicing staff judge advocate.

#### **4.14. Protection of Privileged Safety Information from Use in Court Proceedings.**

4.14.1. The procedures in this section are used to protect privileged safety information when parties to civil litigation or criminal trials attempt to compel its release.

4.14.2. A copy of the releasable portions of the safety investigation report shall be provided to a party of a court proceeding upon request. Information that is protected from release to the public only by the Privacy Act is releasable for this purpose. All such requests must be forwarded to AFSEC/JA for action.

4.14.3. Upon receipt of legal process requiring participation in a court proceeding, including depositions and requests for production of documents, contact AFSEC/JA and the nearest AF base legal office as soon as possible as these are time sensitive matters. Also contact the Claims and Tort Litigation Division's Aviation Law Branch at (DSN 612-4620; commercial (240) 612-4620) to determine the best method to forward a copy of the legal process for action.

4.14.4. Requests for privileged safety information will be processed in accordance with DoDI 6055.07 and the delegation of authority provided in AF Mission Directive 1, *Headquarters Air Force (HAF)* and HAF Mission Directive 1-46. Copies of any court orders seeking to compel release of privileged safety information should be immediately forwarded to AFSEC/JA.

4.14.5. Encourage requesters to ask the Command Judge Advocate for the AFI 51-503 accident investigation report instead, if one has been prepared.

## Chapter 5

### DETERMINING INVESTIGATIVE RESPONSIBILITY

**5.1. General Information.** The AF generally assigns mishap investigative responsibilities to the Command that experienced the loss of an assigned/owned asset (personnel or property). The Command with investigative responsibility may or may not have Operational Control over the asset. In some cases, mishaps may involve assets or individuals from multiple agencies. Follow the guidance in this chapter and DoDI 6055.07 Enclosure 8 to determine mishap notification, investigation, and reporting procedures.

**5.2. Convening Authority Determination.** The Convening Authority is the commander who has the responsibility and authority to order a safety investigation. The Command commander of the organization that is responsible for the damaged asset or injured personnel is the convening authority unless: AF/SE assumes investigative responsibility, Convening Authority responsibility is transferred to another Command commander (with the concurrence of both commanders and AF/SE), or investigative responsibility is delegated to a lower level commander (off-duty Class A and Class B-E mishaps).

5.2.1. For all on-duty Class A and all NUCFLASH, BROKEN ARROW, EMPTY QUIVER, or BENT SPEAR mishaps, the Command commander is the Convening Authority. This authority will not be delegated to a subordinate commander. **Exception:** For ARC Class A mishaps see paragraph 5.5.

5.2.2. For all other events, the Convening Authority may be delegated to an appropriate command level. This delegation will be made in writing within the Command supplement. This delegated Convening Authority cannot be transferred without the concurrence of the Command commander.

5.2.3. AFMC has Convening Authority and is the accounting organization for property damage mishaps when AFMC has taken possession of another Command's assets for modification, maintenance, repair, overhaul, test, training, or experimental/developmental projects. Possession will be determined in accordance with AFI 21-103, or AFI 23-111, *Management of Government Property in Possession of the Air Force*.

5.2.4. If Convening Authority responsibility is transferred, the accounting organization remains the unit of assignment for the damaged assets or injured personnel.

**5.3. Events Involving Multiple Commands.** Involved Command commanders will determine which Command will assume investigative responsibility and advise AF/SE within 24 hours. In general, the Command whose asset initiated the event will assume investigative responsibility. However, if initially unclear, the Command sustaining the highest level of loss in the event will assume investigative responsibility. The Command commander may determine other compelling reasons exist for assigning investigative responsibility differently. If the Commands cannot reach agreement, the AF/SE will determine event investigation responsibility.

**5.4. Events Involving Multiple Services.** For multi-service or joint operational events, follow DoDI 6055.07 Enclosure 4. For mishaps involving other DoD organizations, such as the Defense Contract Management Agency, the Command Director/Chief Of Safety should contact the applicable AF Safety Center discipline division to determine investigative responsibility.

**5.5. Events Involving ARC Assets.** The Convening Authority for all ARC Class A aviation mishaps is the lead MAJCOM commander. For all other events, Convening Authority is determined by the AFRC commander or the Director of the NGB as applicable.

**5.6. Events Involving NATO Systems or Personnel.** Investigate and report events involving AF aircraft, space vehicles, or missiles according to this instruction. Comply with NATO Standardized Agreements 3531, 3102, *Flight Safety Co-operation in Common Ground/Air Space*, 3318, *Aeromedical Aspects of Aircraft Accident and Incident Investigation*, and Air Standard 85/02A, *Investigation of Aircraft/Missile Accidents/Incidents (with US reservations)*. The investigation required under NATO Standardized Agreement 3531 is in addition to, and conducted separately from, the investigation required by paragraph 1.3.

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

5.6.2. When an on-duty ground event involves both USAF and NATO assets and/or personnel (military or civilian), the USAF will conduct a safety investigation.

**5.7. Events Involving Non-NATO Foreign Military Equipment or Personnel in the Continental US (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.

5.7.1. Unless otherwise specified in a contract/MOU, when an event involves only foreign military assets and/or personnel, the foreign nation military authorities are responsible for the investigation to include off-duty mishap/events. 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.

5.7.2. When an event involves a foreign military aircraft and a US civilian aircraft in the CONUS, the National Transportation Safety Board has priority over the investigation (see paragraph 5.8).

5.7.3. When an on-duty event involves both USAF and foreign assets and/or personnel (military or civilian), the USAF will conduct a safety investigation. Depending on the circumstances the National Transportation Safety Board may take priority over the investigation.

**5.8. Events Involving Civil Aviation, Commercial Spacelift, Civil Air Patrol and USAF Aero Clubs, and USAF Initial Flight Training Students.**

5.8.1. The National Transportation Safety Board investigates events that involve both an AF and a civil aircraft that occur within US jurisdiction. The AF may send an observer to the National Transportation Safety Board investigation and/or may conduct a separate investigation. However, the National Transportation Safety Board has priority over all evidence. See AFI 91-206 for guidance on National Transportation Safety Board, FAA, and AF cooperation in these investigations.

5.8.2. AF events that occur within US jurisdiction involving commercial spacelift may be investigated by the National Transportation Safety Board, the FAA Office of Commercial

Space Transportation, and the commercial vendor depending on the nature and extent of the mishap. The AF may send an observer to any of these investigations and/or may conduct a separate investigation. If the National Transportation Safety Board leads the investigation, the National Transportation Safety Board has priority over all evidence. See AFMAN 91-222 for more information.

5.8.3. For events involving Civil Air Patrol, USAF Regular AF, or government civilians flying Civil Air Patrol-owned assets on approved AF missions, follow the procedures in paragraph 5.8.1 and AFMAN 91-223. Events involving Civil Air Patrol volunteers or Civil Air Patrol Corporation employees will be handled by the National Transportation Safety Board/FAA.

5.8.4. USAF Aero Club Events. For events involving AF Aero Clubs, the National Transportation Safety Board is the lead investigating agency.

5.8.4.1. If the National Transportation Safety Board or designated representative agency does not investigate, the host wing commander will direct the wing safety office to conduct an investigation. **Exception:** For events occurring outside the US, the host nation civil aviation authority may have jurisdiction and investigative authority.

5.8.4.2. If an Aero Club aircraft is on a USAF-directed mission (declared in advance as a Public Aircraft Operation by military authority), investigate in accordance with this AFI and AFMAN 91-223 (e.g. AF personnel using an Aero Club aircraft to conduct an airfield assessment for certification purposes). For further information regarding aircraft status, see Defense Contract Management Agency Instruction 8210.1, *Contractor's Flight and Ground Operations*, US Armed Forces Public Aircraft Operation Decision Tool. Aero Club aircraft damage or injury to the pilot or aircraft maintenance personnel occurring outside of USAF-directed missions will be investigated in accordance with this instruction and AFMAN 91-224, *Ground Safety Investigations and Reports*.

5.8.5. Civil Aviation events resulting in injury to AF students participating in Initial Flight Training and other contracted flight training will also be conducted in accordance with this AFI.

**5.9. Mishaps Involving Contractors.** The Command commander of the contracting activity is the Convening Authority, except as noted below:

5.9.1. If another DoD agency administers the contract and the mishap involves reportable damage or injury to the AF, the Command who suffered the preponderance of loss will ensure the mishap is investigated and reported according to this instruction.

5.9.2. If the contracting activity is not subordinate to a Command, then AF/SE is the Convening Authority. The Convening Authority may be delegated in accordance with paragraph 5.2. These losses are recorded as mishaps to the "USAF at Large" in the AF Safety Automated System.

5.9.3. Mishaps Involving Non-Accepted AF Aerospace Vehicles. Non-accepted aerospace vehicle mishaps may be investigated at the discretion of the Convening Authority.

5.9.4. Mishaps involving aerospace vehicles leased, bailed, furnished, or otherwise loaned to a Non-AF organization for modification, maintenance, repair, overhaul, test, contract training, or experimental/developmental purposes. The Command commander who

negotiates the contract, Cooperative Research and Development Agreement, or other agreement is the Convening Authority.

5.9.5. Mishaps involving aerospace vehicles leased, bailed, or otherwise loaned to a Non-AF organization for operational activities. The Command commander of the unit of assignment is the Convening Authority. The Convening Authority is responsible for the safety investigation and reporting, although the aerospace vehicle may not be under the operational control of the AF.

5.9.6. Aerospace Vehicle Contractor Mishaps Involving AF Indemnification. For operations involving unusually hazardous safety risks that are indemnified by the AF, such as contractor provided launch services for AF or National Security Space payloads, the Command that acquired the operational service is the Convening Authority for the mishap.

#### **5.10. Civilian Occupational Events.**

5.10.1. Notify the nearest Occupational Safety and Health Administration area or regional office within 8 hours of an on-duty event when the event results in an AF civilian employee fatality, to include heart attack victims. For any inpatient hospitalization, amputation, or eye loss involving an AF civilian employee that occurs within 24 hours of a work-related incident, report the event within 24 hours of notification. If unable to contact the nearest Occupational Safety and Health Administration area office or regional office within the required 8-hour time frame, contact the Occupational Safety and Health Administration 24-hour toll free hotline (1-800-321-OSHA [6742]). **(T-0)**

5.10.2. Occupational Safety and Health Administration officials may accompany AF safety investigators as observers, or they may conduct a separate investigation of occupational events involving either a DoD civilian fatality or the inpatient hospitalizations of one or more civilian personnel (one of which must be an on-duty DoD civilian employee). Ensure AF personnel accompany Occupation Safety and Health Administration officials.

#### **5.11. Special Circumstances.**

5.11.1. Events 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 events involving other friendly nations, the involved Service Safety Chief shall consult with the Deputy Under Secretary of Defense for 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, for specific guidance on command relationships and reporting requirements.

5.11.2. Events Involving Potential Criminal Acts. If safety investigators discover evidence of criminal acts causal to the event, they must immediately stop investigating and notify the Convening Authority. When they determine there is credible evidence of criminal activity, the Convening Authority shall notify the responsible Military Criminal Investigative Organization or Federal or local law enforcement, depending on jurisdiction at the location of the mishap, in accordance with DoDI 6055.07 paragraphs E3.3 and E4.3.b(1). After the

Safety Investigation Board President consults with AFSEC/JA and advises the Convening Authority, the Convening Authority will determine whether the safety investigation should continue in whole or in part, or be suspended pending the criminal investigation. In the investigation of a fatal event (if initiated), an Office of Special Investigations investigation will take precedence over the safety investigation until criminal activity, natural causes, and suicide have been ruled out as possible causes of damage, injury, or death. 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. If the safety investigation is suspended, it may be resumed and completed after the criminal investigation or when otherwise determined by the Convening Authority, as appropriate.

5.11.3. Events Involving Fire Loss. For fire losses meeting the Class A or B mishap threshold involving real property, wildlands from wildland fires, or personal property (excluding military aircraft flight-related operations), provide an independent fire investigation and report. The fire investigation and report shall identify point of origin and cause of fire (the circumstances, conditions, or agencies that bring together a fuel, ignition source, and oxidizer, such as air or oxygen) for inclusion in subsequent legal or safety investigations. See AFI 32-2001, *Fire Emergency Services Program*, for support provided by the Fire Emergency Services office for mishap investigations and reports. Fire reports will be loaded in the appropriate Tab when applicable.

## Chapter 6

### SAFETY INVESTIGATIONS

**6.1. General Information.** Safety investigations are conducted to determine why an event occurred in order to prevent recurrence. To do this, root cause must be determined and sound preventative recommendations developed. Safety Investigation Boards and Single Investigating Officers accomplish root cause analysis by first determining what factors led to an event, developing findings from those factors, and finally crafting recommendations.

6.1.1. All Class A and B on-duty investigations will culminate with a formal report that contains a narrative sufficient for conveying critical mishap prevention information to the reader. 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 event sequence.

6.1.2. In addition, formal reports must include supporting materials organized by Tabs (A-Z). Supporting material includes technical reports, training records, photographs, etc. See discipline-specific safety manuals for Tab requirements.

### 6.2. Investigation Funding.

6.2.1. Local Support. The commander of the AF installation hosting the Safety Investigation Board funds all in-house support even if the host installation is not assigned to the investigating Command. Occasionally, investigations are conducted in areas where military support is not available. When civilian services are required, commanders at the installation supporting the Safety Investigation Board will assign finance and contracting officers. The finance officer will have authority and funds to pay for all support requirements (DoD 7000.14-R, *Financial Management Regulation*, Volume 5, Disbursing Policy, Chapter 2, Section 0209, Imprest Funds). The contracting officer must have a warrant (authority) to purchase equipment and services for the board.

6.2.2. TDY Travel. Each Command, via their respective wings/units, funds TDY of its assigned personnel who are AF board members or technical experts. Variations and rental cars should be authorized. For joint service boards, each service funds its own members' TDY. The investigating Command funds travel costs of members from another service appointed to an AF Safety Investigation Board. Observers to an AF Safety Investigation Board fund their own TDY. AF Safety Center Safety Investigation Board representatives also travel via their own funding.

6.2.3. Contractor support. 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).

6.2.4. Other contractual services not related to paragraph 6.2.3. The Convening Authority funds leasing of special equipment/vehicles, leased communications, and other contractual services. For technical assistance and laboratory analysis (see paragraph 6.7) from non-AF



specialists, the Convening Authority or program manager may have to provide funding to obtain support.

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

**6.3. Investigation Options.** Event circumstances, anticipated complexity, and discipline-specific requirements drive an investigation's membership. Investigations may be made up of multiple members (Safety Investigation Board), or a single member (Single Investigating Officer). The Convening Authority's safety staff will closely follow events that have damage estimates close to the threshold limits or injuries/occupational illnesses that have the potential for improving or worsening. Refer to the discipline-specific safety manual for requirements.

6.3.1. Persons occupying full-time safety positions routinely examine privileged documents. They are not permitted to serve on or provide substantive support to legal investigations as long as they are performing full-time safety duties. Legal investigators will not attend Safety Investigation Board or Single Investigating Officer proceedings, or meetings, or have access to or discuss any Part 2 privileged information with the Safety Investigation Board, Single Investigating Officer, or AF safety officials. This prohibition also applies to the briefing given to the Convening Authority on the safety investigation results.

6.3.2. Safety Investigation Board members or Single Investigating Officers will not be witnesses for other boards investigating the same mishap except to provide Part 1 factual information or to provide purely non-privileged factual information within their knowledge that is not otherwise available.

6.3.3. Safety Investigation Board members, or Single Investigating Officers, and technical advisors will not act as investigators or technical advisors for a legal investigation of the same event.

6.3.4. Safety Investigation Boards. Safety Investigation Boards are made up of multiple members assigned to investigate an event. Contractor representatives will not be members of a Safety Investigation Board. **(T-1)** They are technical experts providing assistance to the Safety Investigation Board.

6.3.4.1. For all investigations, at least one Safety Investigation Board member must be equal to or senior in rank to the senior person directly involved in the event. **(T-1)**

6.3.4.2. Select Safety Investigation Board members who do not have a personal interest in the investigation and who are able to act impartially. **(T-1)** See discipline-specific safety manual for Safety Investigation Board personnel limitations and restrictions.

6.3.4.3. Select a Safety Investigation Board member qualified in safety investigations for each safety discipline involved in the event. **(T-1)** A system safety engineer should be included in all Class A and B mishap investigations. The Safety Investigation Board or Single Investigating Officers will coordinate with the Convening Authority regarding requests for additional board members, observers, and technical experts. **(T-1)**

6.3.4.4. Do not assign foreign exchange officers or other foreign officers serving with the USAF as formal Safety Investigation Board members. **(T-1)** This exclusion does not

apply to AF Safety Center Safety Investigation Board representatives. Comply with provisions in standing international agreements.

6.3.4.5. ARC participation in Safety Investigation Boards. The Convening Authority may appoint Reservists/Air National Guardsmen to Safety Investigation Boards with the concurrence of the AFRC/NGB. Ensure Safety Investigation Board duties do not create a conflict of interest with the individual's civilian occupation or interests. Commands may execute MOA/MOUs with the AFRC and NGB to outline processes for nominating Safety Investigation Board members as needed on ARC-involved events.

6.3.4.5.1. AF Reserve Command. Air Reserve Technicians may elect to participate in either military or civilian status, as appropriate. Traditional reservists will be in a military status. **(T-1)**

6.3.4.5.2. Air National Guard. ANG personnel may participate in either military or technician status, as appropriate.

6.3.5. AF Participation in Non-AF Investigations. When AF representation to another Service's or government agency's investigation is desired, the AF Safety Center will contact the Command that can best meet the requirement. The Command Director/Chief of Safety will coordinate the selection with the AF Safety Center. Once the AF/SE approves the nominee, the AF Safety Center will provide a fund cite to the Command and establish direct communication with the individual. AF representatives should be graduates of a formal AF safety training course.

6.3.6. Participation in AF Investigations by Non-AF Personnel. Sometimes a mishap involves weapon systems or equipment common to another US military service or agency (FAA, National Air and Space Administration, etc.). In these cases personnel from the other service or agency may request to observe the AF investigation. The AF Safety Center forwards these requests to the Convening Authority. Refer to AFI 91-206 and applicable MOA/MOU for interagency involvement. If approved by the Convening Authority, observers are authorized to observe Safety Investigation Board activities and may participate to the extent authorized by the Safety Investigation Board President and published guidance. An observer is not a member of the AF Safety Investigation Board. Non-DoD observers may participate to the extent authorized by the Safety Investigation Board President, but may not have access to any privileged safety information or discussions, including participation in or access to direct confidential testimony/statements. **Exception:** For National Transportation Safety Board and FAA observers, see AFI 91-206.

**6.4. Investigation Timeline.** The safety investigation should be completed within 30 (45/90 for space mishaps) days of the mishap (see Table 7.1 for reporting timelines). The investigation should place a greater priority on a thorough, complete, and accurate safety report than on trying to finish in the 30-day timeline. If the investigation cannot be completed within the required time period, the Safety Investigation Board or Single Investigating Officer will request an extension from the Convening Authority. The Safety Investigation Board or Single Investigating Officer will annotate the extension and approval by the Convening Authority in each status message. The Safety Investigation Board should remain convened until all aspects of the investigation are completed (the Safety Investigation Board may temporarily de-convene while waiting to outbrief the Convening Authority).

**6.5. Controlling Information Collected by the Safety Investigation Board or Single Investigating Officer.** Safety Investigation Board Presidents and Single Investigating Officers will ensure that all information, privileged or not, collected by safety investigators is not released outside safety channels except in accordance with this instruction.

6.5.1. Safety Investigation Board Presidents and Single Investigating Officers will ensure that everyone working on their team is briefed on the restrictions. Every member of a safety investigation that produces a formal report will sign a memorandum documenting **Guidance To Investigators On Controlling Information** 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. Use the template located in the AF Safety Automated System Pubs & Refs section.

6.5.2. The Safety Investigation Board/Single Investigating Officer is not prohibited from sharing information with technical experts who, although not members of the board, analyze information or wreckage on behalf of safety investigators. Every such technical expert must first sign a **Non-Disclosure Agreement-Safety Investigation** or **Non-Disclosure Agreement – Contractor Reps Serving as Tech Experts to SIBs** (as applicable). Use the templates located in the AF Safety Automated System Pubs & Refs section.

6.5.3. All Part 1 information and all other non-privileged information and evidence gathered by safety investigators, even if not included in Part 1, is releasable to the Accident Investigation Board and other legal investigations. However, portions of Part 1 may not be releasable to the public since they may include information protected by the FOIA, the Privacy Act, Export Control laws, or proprietary contractor information. The legal investigation ensures compliance with these laws prior to public release of the report.

**6.6. Investigative Evidence.** Safety investigators must use all information available to investigate an event. Witnesses, materiel analysis, historical documents, recorder data, etc. must all be reviewed and analyzed to determine root cause of an event.

6.6.1. Witnesses. Use the following guidelines for interviewing witnesses:

6.6.1.1. Prior to conducting any witness interviews ensure the applicable non-privileged (**Non-Privileged Witness Agreement**) or privileged (**Privileged Witness Agreement**) documents are signed by the witness. Use the templates located in the AF Safety Automated System Pubs & Refs section.

6.6.1.2. Ensure witness interviews and statements are conducted in a manner that is free of inappropriate influence or coercion and encourages disclosure of accurate information. Do not advise the witness about any matters not related to the safety investigation. Contact AFSEC/JA with questions regarding whether a particular interview technique is appropriate. If a witness provides a statement while under medication, add a notation of the medications, doses and when taken at the time of their statement.

6.6.1.3. If a witness refuses to be interviewed, contact their commander, Convening Authority safety office, or AFSEC/JA, to discuss lawful orders to participate.

6.6.1.4. Do not have witnesses testify under oath. Ensure witnesses understand that they are obliged to give honest, good faith testimony. See paragraph 4.5 for a discussion on the promise of confidentiality.

6.6.1.5. If a safety investigator believes AF personnel questioned in the investigation may be guilty of criminal misconduct, refer to paragraph 5.11.2.

6.6.1.6. 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 AFSEC/JA if the Safety Investigation Board is required to interview suspected criminals.

6.6.1.7. Retaining Access to Participants. Safety investigators may need frequent access to participants in an event. Commanders will make all participants available to the investigation upon request of the Safety Investigation Board President or the Single Investigating Officer. The Safety Investigation Board President or Single Investigating Officer will advise the commander when participants are no longer needed.

6.6.1.8. Returning Participants to Duty. Safety investigators do not make determinations regarding the fitness of participants to be returned to normal duties. Commanders decide if and when participants are to be returned to duty.

6.6.1.9. Commercial Space Launch Event. Refrain from interviewing witnesses until the National Transportation Safety Board investigator (or the FAA investigator where the FAA is the lead) has arrived, unless there is a compelling reason to take the witnesses' statement(s) immediately (e.g. transient witnesses or life-threatening injuries).

6.6.1.10. This instruction requires collecting and maintaining information protected by the *Privacy Act of 1974* as amended at Title 5, United States Code, Section 552a. Safety investigators will request the DoD ID number of military members and civilian employees involved in reportable events. Inform individuals that the *Privacy Act of 1974* as amended at Title 5, United States Code, Section 552a, is the legal authority for requesting the DoD ID number and that the number will only be used for safety event investigating and reporting.

6.6.2. AF Materiel/Wreckage. Use the following guidelines when impounding AF materiel/wreckage:

6.6.2.1. Interim Safety Board, Safety Investigation Board, and Single Investigating Officer activities have inherent priorities over other activities and investigations connected to the mishap (except criminal), including the right to impound AF property involved in the event. 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 Interim Safety Board President, Safety Investigation Board President, or Single Investigating Officer may choose to remove wreckage interfering with essential mission activities or causing a hazard at the event 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 Safety Investigation Board or Single Investigating Officer, thoroughly document the site (photographs, video) prior to moving. Be cognizant of any classified information requirements. However, wreckage and other evidence in Class A mishaps are automatically on legal hold and

require authorization prior to disposal, repair, or return to service in accordance with AFI 51-503, paragraphs 9.5 and 9.6.

6.6.2.2. If there is potential for Nuclear Weapons Related Materiel (see AFI 20-110, *Nuclear Weapons-Related Materiel Management*) to be recovered as part of the wreckage, the owning Nuclear Weapons Related Materiel Accountable Officer will notify the Interim Safety Board, the Safety Investigation Board, or the Single Investigating Officer and provide a list of national stock numbers, nomenclatures, and serial numbers. The Nuclear Weapons Related Materiel Accountable Officer will assist with identifying any Nuclear Weapons Related Materiel in the wreckage.

6.6.2.2.1. The Interim Safety Board, the Safety Investigation Board, or the Single Investigating Officer must notify the Nuclear Weapons Related Materiel Accountable Officer if impounding any Nuclear Weapons Related Materiel assets. Additionally, a listing of all Nuclear Weapons Related Materiel assets identified and/or recovered from the wreckage must be provided to the Nuclear Weapons Related Materiel Accountable Officer detailing national stock numbers, part number, location, and quantity.

6.6.2.2.2. The Interim Safety Board, the Safety Investigation Board, or Single Investigating Officer will not ship or transport Nuclear Weapons Related Materiel assets to any other location unless coordinated through the Nuclear Weapons Related Materiel Accountable Officer.

6.6.2.2.3. The Interim Safety Board, the Safety Investigation Board, or Single Investigating Officer must notify the Nuclear Weapons Related Materiel Accountable Officer when transferring custody of Nuclear Weapons Related Materiel assets to legal representatives. Nuclear Weapons Related Materiel assets will be clearly identified and segregated while transferring custody.

6.6.3. Life Sciences Evidence. The Interim Safety Board, the Safety Investigation Board, and the Single Investigating Officer will have access to many forms of Life Sciences evidence, including personal and protected health information. The Interim Safety Board, the Safety Investigation Board, and the Single Investigating Officer will comply with safety privilege and with the Privacy Act of 1974 to protect this information.

6.6.3.1. Include only medical and personal information that is relevant to the event to avoid an unnecessary privacy violation of the individual(s). This includes physical exams, laboratory and radiological testing of survivors, personal equipment, aircrew flight equipment, medical/dental/mental health/substance abuse/family advocacy charts and past histories, initial medical interviews, and other information which points to the mental and physical capability of the personnel involved in the event.

6.6.3.2. Human remains are also evidence. The Safety Investigation Board medical member should be aware of where all remains are and their status (i.e., awaiting autopsy, returned to family, etc.). Great care must be taken to ensure a positive chain of custody for all human remains. If any chain of custody issues arise, contact the Convening Authority immediately. 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 34-501, *Mortuary Affairs*

*Program.* See AFMAN 91-223 or AFMAN 91-224, under “Medical Evidence Preservation,” for additional guidance.

6.6.4. Shipping Investigative Evidence. Combat zones present unique challenges and, in certain cases such as remotely piloted aircraft/unmanned aerial system events, evidence (e.g. 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 event evidence needing shipment for analysis as time-critical investigative evidence. Most investigative evidence will be shipped via the nearest (local) Traffic Management Office or Distribution Flight, utilizing AF organizations and assets to the maximum extent possible. The shipping agency will set the priority of the cargo for channel flights in accordance with AFI 24-203, *Preparation and Movement of Air Force Cargo*, 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 US Postal Service or contractors such as Federal Express, United Parcel Service. Obtain Transportation Account Codes from the 635<sup>th</sup> Supply Chain Operations Wing.

**6.7. Obtaining and Using Technical Assistance and Laboratory Analysis.** When the investigation is beyond the expertise of the Safety Investigation Board or the Single Investigating Officer, they will request technical assistance.

6.7.1. For all Class A and B mishaps, technical assistance and laboratory analysis will be requested through the AF Safety Center. For all other events, technical assistance and laboratory analysis may also be available through the AF Safety Center. See Attachment 2 for technical assistance contact information.

6.7.2. Using Technical Experts.

6.7.2.1. Technical experts supporting an investigation are bound to follow Safety Investigation Board President and the Single Investigating Officer guidance while directly working and serving the Safety Investigation Board. This applies to DoD military and civilian personnel as well as contractor representatives. The Safety Investigation Board President or Single Investigating Officer should involve technical experts as early in the investigation as possible, ideally at the start of the investigation with the Interim Safety Board hand-off brief. The Safety Investigation Board President or Single Investigating Officer should also include technical experts in deliberations to formulate valid findings and viable recommendations.

6.7.2.2. Upon completion of their investigations, technical experts must provide a written report detailing results of their work.

6.7.2.3. Safety Investigation Board Presidents and Single Investigating Officers must ensure a **Non-Disclosure Agreement-Safety Investigation** or **Non-Disclosure Agreement – Contractor Reps Serving as Tech Experts to SIBs** (as applicable) on protection of privileged data is prepared and endorsed by all non-AF Safety Investigation Board personnel (e.g. contractors, National Transportation Safety Board) offered a promise of confidentiality or provided access to privileged safety information. Use the templates located in the AF Safety Automated System Pubs & Refs section.

### 6.7.3. Reports from Technical Experts.

6.7.3.1. Reports from technical experts will be written for Part 1, Part 2, or both parts of the Safety Investigation Board report.

6.7.3.1.1. A technical report written for Part 1 will contain observations, analysis, and conclusions based solely on physical evidence, other factual information, and statements provided without a promise of confidentiality. This may include factual information presented during Safety Investigation Board discussions where the technical expert is present, but not selected information or direction which would reveal the board's analysis. This also includes focus on key factual data, detailed system descriptions or background information when it supports a technical expert's conclusion. 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 Safety Investigation Board or Single Investigating Officer will thoroughly review all Part 1 reports from technical experts to ensure they do not contain privileged information and are not based on direction from the Safety Investigation Board which might reveal the board's analysis. A contractor's proprietary information does not make the report privileged, but will require appropriate markings so affected portions are not publicly released. Use the templates located in the AF Safety Automated System Pubs & Refs section.

6.7.3.1.2. A technical report written for Part 2 may contain analysis, conclusions and recommendations based on privileged information to include confidential statements, appointed Safety Investigation Board member deliberations, or proprietary company information. Part 2 of the technical report is not meant to duplicate information provided in Part 1, but to provide supplemental analysis and conclusions to assist the Safety Investigation Board in determining causes and recommendations. A Part 2 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. A signed **Non-Disclosure Agreement-Safety Investigation** or **Non-Disclosure Agreement – Contractor Reps Serving as Tech Experts to SIBs** (as applicable) will be placed in Tab W with any privileged technical reports. Use the templates located in the AF Safety Automated System Pubs & Refs section.

6.7.3.1.3. Contractor representatives requesting a claim of privilege/with an approved promise of confidentiality for their technical reports may submit a Part 2 only report, provided the AF maintains sole possession or control.

6.7.3.2. 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.

**6.8. Determining and Documenting Factors.** The narrative of a safety investigation report is comprised of factors that collectively answer the “why” an event occurred. Factors are based on the weight of evidence, professional knowledge, and good judgment of the investigators. The

analysis contained in factors lead to the findings and recommendations. Factors that directly led to injury, damage, or a hazardous event are considered causal and result in causal findings. All Class A and B mishaps will contain at least one causal factor.

6.8.1. Factors. A factor is any deviation, out-of-the-ordinary or deficient action or condition, discovered in the course of an investigation that in the investigator's opinion contributed to the eventual outcome. Determining factors (and eliminating non-factors) enables the investigators to focus the investigation from all the issues under examination to those specific areas that are significant in the event sequence. Factors explain why causes, such as pilot error, supervision, or equipment failure occurred. Factors are not mutually exclusive but are often interrelated and in some cases influence each other. Factors are the basis for primary findings and recommendations. Most events involve multiple factors. When applicable, include a discussion of related human factors using the DoD Human Factors Analysis and Classification System. For example, in a spatial disorientation event include the human factors that contributed to the disorientation, such as fixation or distraction and how these were manifested. See current DoD Human Factors Analysis and Classification System guide located in the AF Safety Automated System Pubs & Refs section. The DoD Human Factors Analysis and Classification System codes in the narrative and the AF Safety Automated System must match.

6.8.2. Non-Factors Worthy of Discussion. Non-Factors Worthy of Discussion typically fall into one of three categories: areas uncovered during the investigation that did not cause the event or influence the outcome but should be fixed due to the potential to be a factor in a future event (e.g. incorrect information in a maintenance technical order), areas that were thoroughly investigated and subsequently ruled out as factors (in order to provide context to the audience on why these areas are not factors), and areas that may be considered an interest item to the Convening Authority (e.g. risk management, crew resource management). Non-Factors Worthy of Discussion are the source for Other Findings and Recommendations of Significance. Not all Non-Factors Worthy of Discussion result in Other Findings and Recommendations of Significance, but all Other Findings and Recommendations of Significance must have a corresponding Non-Factor Worthy of Discussion.

6.8.3. For system-related events, determine whether the program office previously identified the hazards that played a role in the event sequence and had included those hazards in its Operational Safety, Suitability, and Effectiveness risk management efforts. All system-related Class A and B mishaps should include a program office analysis of hazards that contributed to the mishap and recommendations for material risk mitigation measures, especially those that minimize potential human errors.

**6.9. Determining and Documenting Causes.** A cause is a deficiency, which if corrected, eliminated, or avoided, would likely have prevented or mitigated the event damage or injury. In most instances a causal deficiency is correctable by commanders, supervisors, or individuals.

6.9.1. Cause does not imply blame and it is therefore imperative to determine if a person's performance or judgement was reasonable. If a person's performance or judgment was reasonable considering the event circumstances, do not assign cause. It is not appropriate to expect extraordinary or unique superior performance in such cases.

6.9.2. Risk management is an expected function for all organizations, and improper risk management is considered a deficiency that can be causal in an event (See AFI 91-202 and



AFI 90-802, *Risk Management*). In cases where an event 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 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 an event requires a reassessment of the prior risk management decisions. Do not cite risk acceptance as causal when all risk management functions were properly accomplished and a quantified level of risk was accepted at the appropriate level.

6.9.3. Not every deficiency is causal. Some are effects or the expected result of a previously identified cause even though their inclusion only sustains the sequence leading to the event. 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. Likewise, the initiating event may not be causal if the Safety Investigation Board/Single Investigating Officer determines that a safe recovery with existing procedures was reasonable, but deficient follow-on decisions, actions, or events caused the damage/injury (e.g. an in-flight emergency from which the crew should have been reasonably expected to safely recover).

6.9.4. 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.

6.9.5. The action that could have prevented a failure resides within the human realm and not on an object or publication. 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.

6.9.6. Failure to provide a system or procedure may only be causal if a party should reasonably have been expected to know the omission was deficient prior to the mishap.

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

**6.10. Determining and Documenting Findings.** Findings summarize the essential steps in the mishap sequence and culminate the analysis of the associated factor. Findings are based on the weight of evidence, professional knowledge, and good judgment of the investigators. Findings must be based on factors. All Class A – D mishaps will have findings (see discipline-specific manuals for exceptions). Findings are optional for all Class E mishaps and all other events.

6.10.1. Each finding is a single event or condition. Each finding is an essential step in describing the complete event sequence, but not every finding is causal. Findings must be concise (one sentence) and will not include any more information than is necessary to explain the event. Sequence sustaining findings such as “start, taxi, and takeoff were uneventful” may be included and do not need to be linked to a factor.

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

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

6.10.4. Ensure the sequence starts when the initial actions occurred, which may be prior to the day of the mishap (e.g. design problems, improperly written directives, an inadequate training program).

6.10.5. Ensure the sequence continues to the point where all damage or injury has occurred and the initial rescue or recovery actions have been accomplished. **Note:** Do not include actions that follow rescue or recovery actions, such as aircraft impoundment or determination of disability unless they specifically led to further damage or injury.

6.10.6. Include injuries occurring in the event at the appropriate chronological point in the event sequence. For example, insert ejection injuries 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 mishap pilot ejected successfully; the mishap aircraft crashed in a parking lot adjacent to the runway, fatally injuring two persons").

6.10.7. Findings are arranged in chronological order and numbered consecutively. When writing the Tab T, precede each number with the word "Finding" (e.g. Finding 1, Finding 2). When entering findings in the AF Safety Automated System, do not precede the verbiage with "Finding." The AF Safety Automated System automatically labels this information.

6.10.8. Write each finding as a full sentence, not bullet points. Use active voice, where the subject accomplishes the action and past tense, since the events occurred in the past. Spell out acronyms the first time they are used in the findings section. **Examples:** Incorrect – Crew chief clears pilot from chocks and the MP taxis to runway. Correct – The mishap maintainer cleared the mishap pilot (MP) from the chocks.

6.10.9. 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 "Action X most likely occurred due to one or more of the following reasons".

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

6.10.9.2. 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.

6.10.10. Do not include people's names, call signs, DoD Human Factors Analysis and Classification System codes, names of AF bases or companies in the findings. Use terms such as "the mishap aircraft," "the mishap vehicle operator," "the mishap pilot," "the mishap maintainer," etc.

6.10.11. Do not include supporting evidence in the findings. The report narrative includes supporting evidence and conclusions.

6.10.12. Findings shall not include new material not addressed in the factors. If the finding is not identifiable in the factor, the factor was not written completely.

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

6.10.13.1. Is the Finding necessary to sustain the event sequence?

6.10.13.2. Is the Finding a single event or condition?

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

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

6.10.13.5. Does the Finding logically connect to the preceding finding? Read the last finding. Ask "why?", then read the preceding finding. Does it answer the "why?" Continue for each finding.

**6.11. Causal Findings.** Identify causal findings by selecting the "Causal" button when entering findings in the AF Safety Automated System. Do not list causes under a separate heading. Word a causal finding as a clear and simple statement of a single condition or action. Causal findings must have a supporting causal factor detailed in the analysis/formal report.

6.11.1. Causal findings will always be worded in active voice and past tense. A causal finding will identify the causal agent (who), the action taken (what), and the reason for the deficiency (why). Why the action (or lack of action) occurred should be fully explained in the narrative and may be included in the causal finding. **Example:** Due to distraction, the mishap pilot failed to extend the landing gear prior to touchdown.

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

6.11.2.1. Is the causal finding correctable by commanders, supervisors, or individuals?

6.11.2.2. Is the causal finding a clear and simple statement of a single condition or event?

6.11.2.3. Is the causal finding in the active voice, past tense, and does it follow the format: Who did what to whom/what and why?

6.11.2.4. Is the causal finding an effect or an expected result of a previously identified cause, even though its inclusion sustains the event sequence? If so, it is not causal.

**6.12. Determining and Documenting 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. If no recommendations are made in an on-duty Class A or B investigation, 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.

6.12.1. 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, is being addressed and to stay focused on it.

6.12.2. All recommendations should target one or more of the hazards identified and documented during the investigation. It is also sometimes prudent to make two or more

recommendations against one hazard. Developing sound recommendations also requires recognition of the system safety "order of precedence" concept (design changes, safety devices, warning devices, or training and procedures) which recognizes that not all risk mitigation alternatives are equal. Design fixes are the most preferable solutions because they can often completely eliminate the hazard, but these types of fixes often have the highest upfront costs. In all cases use the order of precedence to develop risk mitigation alternatives. As an example, to eliminate or mitigate the identified hazard of a pilot's failure to command landing gear extension which results in a gear-up landing of a training aircraft, one might consider the following:

6.12.2.1. Design: Implement a fixed gear.

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

6.12.2.3. Provide Warning Devices: Implement cockpit warning lights.

6.12.2.4. Develop Training and Procedures: Improve the checklist or its use via training with instructors and in simulators. Mandate use of personal protective equipment.

6.12.3. 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 investigators consider the entire range of available options and not just the cheap and easy ones – which usually have the least mishap prevention value.

6.12.4. 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.

6.12.5. Most recommendations will be associated with causal findings, but not all causal findings will have recommendations. For example, a causal finding may not have a recommendation if the deficiency is already prohibited in command guidance (AFI, technical order, etc.). Likewise, findings that are not causal may also have recommendations written against them.

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

6.12.7. 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 (e.g. deficiency report, study, or contract number).

6.12.8. 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. **Examples:** Poor – Move the right engine fire pushbutton to the right side of the cockpit. Better – Implement changes to the C-17A engine fire pushbuttons to help preclude engine shutdown errors.

6.12.9. 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.

6.12.10. 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.

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

6.12.12. Do not recommend reminding (or commanders reminding/briefing/publishing a flight crew information file) personnel of the importance of simply doing their jobs properly. However, recommendations to place CAUTIONS and WARNINGS in technical order 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.

6.12.13. Include only one action for each recommendation. Rather than sub-grouping recommendations (e.g. 1a, 1b, 1c), use a new recommendation number. Do not create a recommendation in the AF Safety Automated System to state there are no recommendations.

6.12.14. Since recommendations are stand-alone items, when writing them follow the guidance below:

6.12.14.1. Spell out acronyms in each recommendation.

6.12.14.2. Include the item to which the recommendation applies (e.g. F-16C, Technical Order 1F-16C-2-28JG-40-1).

6.12.14.3. Do not write "Recommend..." at the beginning of the recommendation.

6.12.14.4. Do not write "AFSEC/SEF should..." in the recommendation; just start with the required action. The action agencies are the Office of Primary Responsibility (OPR) and office of collateral responsibilities.

6.12.14.5. The following are examples of good recommendation narratives:

6.12.14.5.1. Implement a time change interval for the F-16C main aircraft battery.

6.12.14.5.2. Install a crash survivable flight data recorder on all F-15E aircraft.

6.12.14.5.3. Coordinate with [Non-AF Agency] to post speed limit signs at all flightline entry points.

6.12.15. Recommendations to Change Publications.

6.12.15.1. Recommendations may be made to change publications, technical orders, flight manuals, or checklists. Submit either an AF Form 847, *Recommendation for Change of Publication* or AF Technical Order Form 22, *Technical Manual Change Recommendation and Reply*. See AFI 33-360, AFI 11-215 or Technical Order 00-5-1 for how to complete forms. Additionally, local base support personnel (Standardization and Evaluation and/or Quality Assurance) can assist in completing the forms. If the proposed

change is time sensitive, use the emergency generated recommended change procedure in AFI 33-360, AFI 11-215, or the emergency report format in Technical Order 00-5-1.

6.12.15.2. If applicable, obtain the tracking number from the Command Standardization and Evaluation for AF Forms 847 and unit quality assurance for AF Technical Order Forms 22. Place the tracking number and the event's AF Safety Automated System number on the submitted forms to ensure these recommendations receive the appropriate levels of review. Submit completed forms to the Command Standardization and Evaluation or Command Control Point, as applicable after the investigation is complete.

6.12.15.3. In all cases, protect privileged safety information by sanitizing (see paragraph 4.8.2.) the "reason for recommended change" section of AF Technical Order Form 22 or AF Form 847. The Safety Investigation Board or Single Investigating Officer will place copies of the submitted forms in the applicable formal report Tab.

6.12.16. Determining the appropriate action agencies for each recommendation.

6.12.16.1. Assign action agencies for all recommendations. An OPR is required for every recommendation. Although an office of collateral responsibility is not required, they are appropriate for many recommendations. List only one OPR per recommendation. More than one office of collateral responsibility may be listed for an individual recommendation. Limit OPR and office of collateral responsibility assignment to two- or three-digit organizational levels to ensure proper management level attention.

6.12.16.2. Assign OPR and office of collateral responsibility based upon the lead command and user command philosophy. The AF 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. Furthermore, OPRs should belong to the lead command that bears the preponderance of risk associated with the hazard. 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 scarce resources among competing requirements. See AFPD 10-9 for more information.

6.12.16.3. 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), assign the appropriate office for the event 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 offices of collateral responsibility.

6.12.16.4. 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), assign the appropriate office that has the funding as OPR. Assign offices of collateral responsibility as required.

Should the OPR choose not to implement the recommendation, the recommendation will be transferred to the lead command for risk acceptance during the hazard review board.

6.12.16.5. Although changes to training programs, training equipment, and publishing new or changed paper documents (e.g. AFPDs, AFIs, flight manuals, technical orders) require funding, assign the organization responsible for controlling the content of these products as OPR. Assign office of collateral responsibility as required. For any change requested to Air Education and Training Command (AETC) Technical Training courses, the appropriate AF Specialty Code Career Field Manager is the appropriate OPR.

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

6.12.16.7. Field Operating Agencies normally accomplish AF-level actions. For example, air traffic issues are managed by the AF Flight Standards Agency, not the AF Chief of Operations, Plans and Requirements (AF/A3). However, the Air Staff may be tasked as an OPR or office of collateral responsibility where appropriate.

6.12.16.8. The Safety Investigation Board or Single Investigating Officer is responsible for coordinating all recommendations with their proposed action agencies (OPR and office of collateral responsibility). Ensure the correct OPR and office(s) of collateral responsibility are identified through positive contact (call or e-mailed response) prior to publishing the formal report or final message. Include the name, office symbol, telephone number, and e-mail address of one OPR action officer for each recommendation. Place this information in the dedicated data field provided by the AF Safety Automated System. The Convening Authority safety staff will ensure the Safety Investigation Board or Safety Investigating Officer has made positive contact with the OPR and office(s) of collateral responsibility.

6.12.17. Hazard/Deficiency Statements. When entering recommendations into the AF Safety Automated System the Safety Investigation Board or Safety Investigating Officer is responsible for entering a hazard/deficiency statement. This statement is a non-privileged single sentence related to what hazard or deficiency precipitated the recommendation. The hazard/deficiency should describe a persistent or common hazard, not merely repeat a finding or Non-Factor Worthy of Discussion.

**6.13. Other Findings of Significance and Other Recommendations of Significance.** Guidance for developing and documenting primary findings and recommendations applies similarly to every Other Finding of Significance and Other Recommendation of Significance. Spell out acronyms in each Other Finding of Significance and Other Recommendation of Significance.

6.13.1. Other Findings of Significance are findings the safety investigators believe could contribute to future mishaps, but were not part of the event sequence. Other Findings of Significance are derived from Non-Factors Worthy of Discussion.

6.13.2. Other Recommendations of Significance are recommendations resulting from Other Findings of Significance. Each Other Finding of Significance will be followed by one or more corresponding Other Recommendation of Significance. Assign an OPR and office of collateral responsibility (as required) to each Other Recommendation of Significance.

**6.14. Releasing Investigative Information During an Active Safety Investigation.** It is AF policy to keep the public informed of AF events and safety investigations and to release non-privileged safety information, both favorable and unfavorable. AF 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 Safety Investigation Board President approves the release of all information (including electronic/digital media, photographs, etc.) from the Safety Investigation Board to the Accident Investigation Board or other legal investigation, but will not communicate directly with the media or other members of the public. The release of non-privileged safety information to news media, relatives, and other agencies is through the Accident Investigation Board President, Survivor Assistance Program point of contact, Family Liaison Officer, or Public Affairs representative as appropriate.

6.14.1. The Convening Authority or designated information officer releases factual information about a mishap, including photographs, only as directed in AFI 35-104, *Media Operations*, AFI 35-109, *Visual Information*, and AFI 51-503. 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.

6.14.2. The Accident Investigation Board can release factual event information upon request in accordance with AFI 51-503. If an Accident Investigation Board is not formed, the local commander, 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 Safety Investigation Board or Accident Investigation Board), or if it is privileged safety information. The Accident Investigation Board President will coordinate with the Safety Investigation Board President to determine whether the release of information will impede the Safety Investigation Board's investigation.

6.14.3. Following events where an AFI 51-503 accident investigation or other legal investigation may not take place (such as nuclear, explosives and chemical agents, and directed energy cases) 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 Safety Investigation Board or legal investigation) or if it is privileged safety information. If the safety investigation is ongoing, the legal release authority will coordinate with the Safety Investigation Board President to determine whether the release of information will impede the Safety Investigation Board's investigation.

**6.15. Disposing of Evidence.** Once the Safety Investigation Board or Single Investigating Officer has completed their investigation all non-privileged evidence must be either provided to the legal board president, the host installation staff judge advocate, or returned to the owning organization after coordination with the host installation staff judge advocate.



6.15.1. For Class A mishaps, or when notified there will be a legal investigation for other events, provide all non-privileged evidence (photographs, videotapes, data, documentation, etc.) to the legal board in writing in accordance with the discipline-specific manual guidance. The legal board will be responsible for final disposition of all material released to them. 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 Safety Investigation Board to their proper custodian.

6.15.1.1. The Safety Investigation Board President provides Part 1 of the formal report and factual information to the legal board president as soon as possible without creating any risk of interference with the Safety Investigation Board. Examples of information that might be appropriate to provide to the legal board president prior to final acceptance of the Safety Investigation Board may include (this list contains examples only): cockpit and tower audio recordings, data recorders, coroner's report, autopsy report, toxicology test results, police reports, and personnel and medical records. Transferred records should be the whole, original source record (hard copy) and not printouts from the AF Safety Automated System or documents that have been screened, selected, edited, or marked by the Safety Investigation Board. See discipline-specific safety manual for further guidance.

6.15.1.2. Ensure the legal board president knows the disposition of all non-privileged evidence, to include wreckage and components shipped for analysis. The legal board must acknowledge their custodial responsibility in writing which is included in the formal report. If the legal board president is not available and the Safety Investigation Board is prepared to release the evidence, release it to the host installation staff judge advocate, who will maintain custody until the legal board president is able to accept.

6.15.2. Operational assets. Once the investigation has recovered all necessary evidence from the asset involved in the event, the safety investigator will, at an appropriate time, advise the Convening Authority that the Safety Investigation Board is done with that evidence, so the Convening Authority can determine whether the evidence is needed by a legal board or may be returned to the owning unit. The legal board is responsible for operational assets transferred to them by the Safety Investigation Board or Single Investigating Officer. The Convening Authority is generally the final authority to release the asset to the owning unit, but note that all wreckage, evidence, aircraft, remotely piloted aircraft, missile, space vehicles or other assets involved in a Class A mishap require a formal release from legal hold before being released to the owning unit, disposed, repaired, or returned into service. However, if the Class A mishap resulted solely in damage to government property and did not involve the loss/destruction of the asset, the Convening Authority's staff judge advocate may authorize repair and/or return to service in accordance with AFI 51-503, paragraphs 9.5 and 9.6.

6.15.3. Wreckage. After the Safety Investigation Board or Single Investigating Officer has gathered all necessary information from the wreckage (destroyed aircraft, vehicle, etc.), and there is a legal investigation, transfer custody of the wreckage to the legal board president in writing in accordance with discipline-specific manual guidance. If the legal board president is not available, then transfer custody to the host installation staff judge advocate office.

6.15.3.1. 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. The AF Legal Operations Agency Claims and Tort Litigation Division is the release authority for Class A mishaps (see Attachment 2 for contact information and AFI 51-503. for obtaining release from legal hold). The host installation staff judge advocate is the release authority for all other events.

6.15.3.2. 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.

6.15.4. In the case of fatalities, the disposition of human remains 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, the host installation staff judge advocate, and Armed Forces Medical Examiner System to clarify jurisdiction and disposition of human remains.

## Chapter 7

### SAFETY MESSAGES AND REPORTS

**7.1. General Information.** Safety reports include safety messages and formal reports. Access the Air Force Safety Automated System for safety reporting/recording. Once the Safety Investigation Board or Single Investigating Officer completes the investigation a final message is required. A formal report and a briefing to the Convening Authority may be required. Aviation mishaps involving fatalities, and other events when requested, will normally be briefed by the Safety Investigation Board President to the USAF Chief of Staff and the Secretary of the AF. The Issues Division of the Office of the Chief of Safety (HQ AF/SEI) is the focal point for scheduling the USAF Chief of Staff and the Secretary of the AF briefings.

#### **7.2. Safety Messages.**

7.2.1. General Information. Interim Safety Boards, Safety Investigation Boards, and Single Investigating Officers are required to periodically update the safety community on the current status of their investigation. This is accomplished by using the AF Safety Automated System to prepare an appropriate safety message. After an appropriate type of message is selected, the AF Safety Automated System utilizes logic and templates to automatically populate and format the message. Interim Safety Boards, Safety Investigation Boards, and Single Investigating Officers prepare and review messages for release, but the Convening Authority's safety office releases them. The one exception involves the preliminary message where, because of the timeliness of the notification, the Interim Safety Board may release the preliminary message after safety staff (local or Convening Authority) review.

7.2.1.1. Ensure that personally identifiable information (e.g. names, social security numbers) protected by the Privacy Act does not appear in safety messages. More information can be found at <http://www.privacy.af.mil/>.

7.2.1.2. The AF Safety Automated System is only hosted in an unclassified environment; therefore, do not enter or upload classified or DoD Unclassified Controlled Nuclear Information into the AF Safety Automated System. Make every effort to keep investigative reports and briefings unclassified to ensure the widest dissemination possible.

7.2.2. AF Safety Automated System Message Types. Each of the message types in the AF Safety Automated System used by investigations are discussed below.

7.2.2.1. Preliminary Message. Preliminary messages are fully releasable, and because of that, shall only contain factual information. They shall not contain any privileged safety information or information gained through a promise of confidentiality. A preliminary message requires a narrative which includes enough detail so that the reader understands the salient events of the mishap. Although Operational Report -3 reports must meet requirements not set by the safety community, safety personnel should coordinate with the Command Post to ensure that Operational Report 3 reports do not contain inaccurate or privileged safety information.

7.2.2.2. Status Message. Status messages are used to provide periodic updates and announce changes such as a Safety Investigation Board relocation, a Safety Investigation

Board temporarily deconvening, new information discovered, or investigation delays/extensions. If used to report a delay/extension, explain the reason for the delay, the expected completion date, and extension approval from the Convening Authority. Status messages may be sent at any time, but are required when:

7.2.2.2.1. Time conditions in Table 7.1 are met.

7.2.2.2.2. A mishap investigation class or category changes (e.g. a subsequent death from mishap injuries or updated damage cost figures). Prepare and release the status message immediately after making updates in the AF Safety Automated System.

7.2.2.3. Final Message. Final messages represent the culmination of the investigator's efforts. They provide the details of the investigation, thoroughly explain reasoning used, support decisions made, and present the results of the safety investigation. In many cases, it is the only product a reader will ever see. In general, final messages contain the investigator's analysis, rationale, conclusions, and recommendations for prevention. The final message formatting must follow discipline-specific safety manual guidance regardless of whether the formal report is waived. Release the final message after the investigation is complete, but not before all required formal report tab information has been uploaded and the Convening Authority quality control review accomplished (see paragraph 8.2). Do not delay its release for refined cost data, final medical assessments of injury, or internal command comments. **(T-1)**

7.2.2.4. Final Supplemental Message. Release a final supplemental message whenever changes (e.g. new information uncovered, final message was returned to correct errors) to the final message are required. Only primary investigative members are authorized to change the report and they must coordinate on all changes. Include in the summary of changes a short description of what was altered in the report. **(T-1)**

**7.3. Reporting Schedule.** The reporting schedule for each Safety Investigation mishap type is discussed in Table 7.1.

7.3.1. Number of days shown are measured from the mishap date. For Ground mishaps, the reporting timeline begins upon notification to the unit Safety Office.

7.3.2. Regardless of Discipline, Occupational Safety and Health Administration injury and illness information must be input to the Air Force Safety Automated System by day 7 in accordance with 29 CFR 1904.29(b)(3).

7.3.3. Preliminary messages are not required for Class C, D, & E mishaps.

7.3.4. If an investigation is not complete, status messages are required at day 30 and every 30 days thereafter until complete.

7.3.5. Aviation and Ground Class A & B Final message timeline includes 30 days for the investigation, 15 days to brief the Convening Authority, and 3 days to release the message after the brief.

7.3.5.1. For remotely piloted aircraft/unmanned aerial system mishaps, 63 days for CONUS (e.g. 45 + 15 + 3) and 78 days for OCONUS (e.g. 60 + 15 + 3).

7.3.5.2. For mishaps where an engine or engine module is processed through depot, 90 days.

7.3.6. For Space Class A & B mishaps where personnel (i.e., manned spaceflight) or nuclear material are involved, the Preliminary message is due within 8 hours.

**Table 7.1. Mishap Reporting Schedule.**

	<b>Aviation</b>	<b>Ground</b>	<b>Weapons</b>	<b>Space</b>
<b>Class A &amp; B</b>				
Preliminary	1	1	1	1
Status	30	30	30	30
Final	48	48	30	90
<b>Class C, D, &amp; E</b>				
Status	30	30	30	30
Final	30	30	30	45

**7.3.7. Nuclear Surety Reporting Schedule.**

7.3.7.1. For Accidents and Incidents, follow the Table 7.1. Mishap Reporting Schedule for Weapons, Class A & B mishaps.

7.3.7.2. For Deficiencies, follow the Table 7.1. Mishap Reporting Schedule for Weapons, Class C, D, & E mishaps.

7.3.8. Incident Reporting Schedule. Follow the Table 7.1. Mishap Reporting Schedule for the appropriate Discipline, Class C, D & E mishaps.

7.3.9. Hazard Reporting Schedule. Follow the Table 7.1. Mishap Reporting Schedule for the appropriate Discipline, Class C, D & E mishaps.

7.3.10. Safety Study Reporting Schedule. There is no timeline requirement for completion, but a Status message is required at day 30 and every 30 days until complete.

**7.4. Formal Reports.** Detailed information about an event's circumstances and the analysis and conclusions of the safety investigation are organized and assembled into a formal report. AF/SE or the Convening Authority may direct the preparation of a formal report for any event; however, they are required for on-duty Class A and B mishap investigations, as well as nuclear surety accident and incident investigations, unless exempted by discipline-specific safety manual guidance.

7.4.1. Formal Report Structure. Formal reports are composed of Parts, and each Part is further subdivided into Tabs. Tabs comprise electronic copies of evidence used by investigators to complete the event investigation. Tabs B, C, E, H, and P are no longer used, but for consistency with historical records they are included in the formal report layout (Table 7.2). Each Part exists because the information contained in it is afforded different levels of information protection. Part 1 contains factual information, and most of it can be disclosed outside the AF. Part 2 contains privileged safety information which must be protected and can only be used within the AF to further mishap prevention efforts. Part 3 contains briefings and other significant products which are sometimes discovered or produced after a safety investigation has been completed.

**Table 7.2. Safety Investigation Formal Report Layout.**

<b>TAB</b>	<b>USAF SAFETY INVESTIGATION FORMAL REPORT</b>
	<b>Part 1 – Factual Information</b>
<b>A</b>	Safety Investigator Information
<b>B</b>	Not Used
<b>C</b>	Not Used
<b>D</b>	Maintenance Report, Records, and Data
<b>E</b>	Not Used
<b>F</b>	Weather and Environmental Records and Data
<b>G</b>	Personnel Records
<b>H</b>	Not Used
<b>I</b>	Deficiency Reports
<b>J</b>	Releasable Technical Reports and Engineering Evaluations
<b>K</b>	Mission Records and Data
<b>L</b>	Factual Parametric, Audio, and Video Data From On-Board Recorders
<b>M</b>	Data from Ground Radar and Other Sources
<b>N</b>	Transcripts of Voice Communications
<b>O</b>	Any Additional Substantiating Data and Reports
<b>P</b>	Not Used
<b>Q</b>	Evidence Transfer Documents
<b>R</b>	Releasable Witness Testimony
<b>S</b>	Releasable Photographs, Videos, Diagrams, and Animations
	<b>Part 2 – Board Conclusions</b>
<b>T</b>	Investigation, Analysis, and Conclusions
<b>U</b>	Witness Testimony Provided Under a Promise of Confidentiality
<b>V</b>	Other Supporting Privileged Products
<b>W</b>	Technical Reports and Engineering Evaluations Provided Under a Promise of Confidentiality
<b>X</b>	Privileged Photographs, Videos, Diagrams, and Animations
<b>Y</b>	Privileged Medical Information
<b>Z</b>	SIB Final Products
	<b>Part 3 – Other Material</b>

<b>1A</b>	Safety Investigation Board/Single Investigating Officer Final Briefing (Actual)
<b>1B</b>	Safety Investigation Board/Single Investigating Officer Final Briefing with Privacy Information Removed
<b>1C</b>	Safety Investigation Board/Single Investigating Officer Final Briefing with Privacy and Privileged Information Removed
<b>2A</b>	Animations (Actual)
<b>2B</b>	Animations (Sanitized)
<b>3</b>	Other Material

7.4.2. Formal Report Generation. Upload electronic documents to the AF Safety Automated System Tabs section to construct the formal report. Based on investigative information entered, the AF Safety Automated System indicates whether each individual Tab is required or optional. Tabs that are not relevant are not displayed. Tab templates are located in the AF Safety Automated System Pubs & Refs section. Refer to discipline-specific safety manuals for content and formatting requirements. Safety investigations where a formal report is not required may upload files to appropriate Tabs, but must comply with discipline-specific safety manual Tab formatting requirements.

7.4.3. Formal Report Waivers. Refer to discipline-specific safety manuals for procedures to request waivers for individual Tabs and the entire formal report.

**7.5. Classified Reporting.** Do not enter or upload any classified information into the AF Safety Automated System. The AF Safety Automated System is only hosted in an unclassified environment and may therefore only handle unclassified information. For classified events, report via e-mail using an appropriate secure means, such as SIPRNET. Send e-mails to the Convening Authority Director/Chief of Safety, NAF, Command Director/Chief of Safety and the appropriate discipline at the AF Safety Center. All the requirements discussed elsewhere in this AFI are applicable to classified events.

## Chapter 8

### QUALITY CONTROL, OUTBRIEFS, AND NOTIFYING CAUSAL PARTICIPANTS

**8.1. General Information.** Safety investigations are considered complete when the final message, formal report (if required), and briefing to the Convening Authority (if required) are accomplished and the final message is released in the AF Safety Automated System and subsequently accepted by the AF Safety Center administrator after a quality control review.

**8.2. Convening Authority Quality Control Review.** The Convening Authority's safety staff will review final and final supplemental messages and formal reports before release by the Convening Authority. **(T-1)** In addition, Command safety staffs will review all Class A and B final and final supplemental messages and formal reports and NAF safety staffs will review all Class B final and final supplemental messages and formal reports. Convening Authority safety staffs will coordinate all substantive updates with the Safety Investigation Board and Single Investigating Officer. **(T-1)**

8.2.1. Report reviewers shall assess the entire report, including AF Safety Automated System database field entries, the final/final supplemental message, and all Tabs (both required and optional), to ensure investigative guidance and documentation standards established in this AFI and in discipline-specific safety manuals are satisfied. **(T-1)** The review will ensure adequate evidence and analysis is presented to support the investigation's conclusions, findings, and recommendations. **(T-1)**

8.2.2. If any portion of the report, particularly the narrative, findings, causes, DoD Human Factors Analysis and Classification System codes, recommendations, and OPR and office of collateral responsibility assignments do not satisfy established requirements, safety offices shall return the report and work with the investigation to revise it until it meets established requirements. **(T-1)**

**8.3. AF Safety Center Quality Control Review.** The AF Safety Center conducts a quality control review following final and final supplemental message release. Non-compliance items (e.g. unsupported conclusions, incomplete investigation, Tab content/format) will be addressed by the Safety Investigation Board and Single Investigating Officer through the Convening Authority safety staff. The AF Safety Center review process will be accomplished within 10 business days of the final or final supplemental message release. The Convening Authority will ensure the Safety Investigation Board and Single Investigating Officer addresses the results of the AF Safety Center review within 10 business days after AF Safety Automated System notification. **(T-1)**

**8.4. Briefing the Convening Authority.** Board independence is critical to the integrity of the Safety Investigation Board process. Historically, Safety Investigation Board independence is a Congressional interest item, periodically reviewed by the Government Accountability Office and DoD/Inspector General. Convening Authorities must ensure there is a clear and distinct delineation between the safety investigation process and any other investigation which may result from the event. **(T-1)**

8.4.1. For on-duty Class A, B, and other investigations requiring a formal report and nuclear surety (only accidents and incidents), the Convening Authority briefing should be delivered



not later than 15 days after completing the investigation unless exempted by AF/SE through discipline-specific safety manual guidance.

8.4.2. A read-ahead copy of the briefing may be forwarded directly to the Convening Authority and the Convening Authority safety office; however, no further distribution of any type of informational material may occur prior to the briefing except when participants will be attending via audio and/or video teleconferencing means as described in paragraph 8.4.5.2. **(T-1)**

8.4.3. To preserve Safety Investigation Board independence, personnel who attend the briefing will not communicate privileged safety information directly or indirectly with any other non-safety investigation or board related to the mishap.

8.4.4. To preserve Safety Investigation Board independence and protect the safety privilege, judge advocate personnel who attend the briefing will only use their knowledge of privileged safety information to ensure the Safety Investigation Board does not provide privileged safety information to any other non-safety investigation or board related to the mishap.

8.4.5. To preserve independence of the board and to protect safety privileged information when the briefing is accomplished via audio and/or video teleconferencing means the Command/NAF Director/Chief of Safety will:

8.4.5.1. Arrange for an appropriate safety professional to be present at each location to ensure attendance is limited to those directed by the Convening Authority.

8.4.5.2. Electronically distribute one copy of the briefing to the safety professional described in paragraph 8.4.5.1. This copy will NOT be used as a read-ahead.

8.4.5.3. Ensure all attendees have been properly briefed on the limited-use nature of the information being provided and responsibilities and obligations of those personnel who receive privileged safety information.

8.4.5.4. Ensure the electronically distributed copy of the briefing is deleted and any printed copies are shredded after the conclusion of the brief.

8.4.6. Class A-E mishap safety and Nuclear Surety investigation briefings in their entirety, including all ensuing discussions during the briefing, are privileged safety information in accordance with DoDI 6055.07. Therefore, the Convening Authority will limit and control attendance to personnel who require access to privileged safety information to perform clear and specific mishap prevention duties or with a specific mishap prevention purpose. This includes controlling attendance via audio and video-teleconferencing means. Regardless of assignment of Convening Authority, appropriate personnel from Command's owning assets (personnel or property) involved in that event and incurred damage or loss may be invited to the briefing. The Command/NAF Director/Chief of Safety will ensure attendance is limited and will brief the Convening Authority on rules set forth in paragraphs 4.8 and 8.4. **(T-1)**

8.4.7. When the Command commander who is the Convening Authority approves, the Safety Investigation Board may brief the NAF commander (or equivalent such as the USAF Warfare Center Commander) and the affected COMAFFOR for a contingency event, for INFORMATIONAL PURPOSES ONLY, prior to briefing the Command commander. All other investigation briefings and disclosures of the report content to the affected squadron, group, or wing are prohibited and cannot be waived by the Command commander. Prior to

this briefing, the NAF Director/Chief of Safety will brief the NAF commander on rules set forth in paragraphs 4.8 and 8.4. **(T-1)**

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

8.4.7.2. The only personnel authorized to attend the informational NAF commander briefing are the NAF commander, NAF vice commander, and with NAF commander concurrence, the NAF Director/Chief of Safety, Command Director/Chief of Safety, and the mishap wing commander. In the case of an ANG event, in addition to the above authorized attendees, the Director of the ANG, and the event unit's state Adjutant General may attend. For COMAFFOR information briefings, authorized attendees are the COMAFFOR, and with COMAFFOR concurrence, the AFFOR Director/Chief of Safety, and the event air expeditionary wing commander. **(T-1)**

8.4.7.3. In instances where the Convening Authority has been delegated, there will be no intermediate or informational briefings prior to briefing the Convening Authority.

**8.5. Convening Authority Options.** The Convening Authority has two options after receiving the results of a safety investigation:

8.5.1. Option 1. Accept the investigation as reported. The Safety Investigation Board's report is an independent body of work and shall remain free of any external influence; therefore, do not staff the final message or formal report Tabs prior to release. Release the final message and formal report Tabs in accordance with paragraph 7.2.2.3 or 7.2.2.4.

8.5.2. Option 2. Direct the Safety Investigation Board to conduct additional investigation. The Convening Authority will provide feedback and additional guidance to the Safety Investigation Board to ensure the investigation fulfills the purpose, intent, and requirements of the AF Mishap Prevention Program. After the Safety Investigation Board investigates areas identified by the Convening Authority and completes their investigation, the Convening Authority will have the same two options: accept the investigation as reported or direct the Safety Investigation Board to conduct additional investigation.

8.5.3. Any further corrective actions deemed important by the Convening Authority do not require the Safety Investigation Board to reconvene or be incorporated into the Safety Investigation Board's report. The Convening Authority's staff may implement them independently with the Convening Authority's concurrence.

**8.6. Notifying Individual(s) Found Causal in Formal Reports.** This section only applies to mishap investigations and nuclear surety investigations where a formal report was prepared. When a USAF military member or USAF civilian employee has been found causal, that individual (i.e., causal individual) will be given an opportunity to respond.

8.6.1. Non-AF personnel are not offered the opportunity to review the final message or submit a responding statement. This includes AF personnel assigned to billets outside the AF, such as with the Defense Logistics Agency or NATO. **Exception:** Non-AF personnel assigned to fly AF aircraft and afforded safety privilege in accordance with paragraph 4.5 are authorized to submit a statement as long as they still meet the previously mentioned criteria.

8.6.2. Investigator's role. The Safety Investigation Board or Single Investigating Officer shall draft a notification memorandum for each individual found causal. Templates are located in the AF Safety Automated System Pubs & Refs section.

8.6.3. The Convening Authority safety office role. After the Convening Authority accepts the investigation as reported, provide all memoranda to the Convening Authority safety office. In conjunction with releasing the final message, the Convening Authority safety office will distribute all memoranda. For each causal individual attached or assigned to another Command, the Convening Authority safety office will send a memorandum to that Command safety office. The Command safety office will then forward it to the individual's unit Chief of Safety. For all other causal individuals, the Convening Authority safety office will forward the memorandum to the individual's unit Chief of Safety.

8.6.4. Unit safety office role. The Chief of Safety will notify the causal individual's leadership and the causal individual. The causal individual will be given the opportunity to review the final or final supplemental message. Causal individuals may not access the formal report or the Convening Authority briefing. Additionally, they may not retain, copy, transcribe, or photograph the final message in whole or in part. The safety office will then have the causal individual sign the notification memorandum indicating receipt and indicate their intention to either decline comment or provide a responding statement within 5 days.

8.6.4.1. The safety office will upload the causal individual's signed notification memorandum in the AF Safety Automated System using the file share option. The memorandum shall be file shared with the appropriate AF Safety Center discipline (e.g. AF Safety Center Flight Safety Operations Branch (AFSEC/SEFO) for aviation events).

8.6.4.2. If the causal individual provides a response then the safety office will upload the statement in the AF Safety Automated System using the file share option. The statement shall be file shared with the appropriate AF Safety Center discipline (e.g. AFSEC/SEFO for aviation events).

8.6.5. Causal Individual's role. The responding statement must be completed and given to the unit safety office within 15 calendar days. The statement is privileged safety information and will be marked, protected, and handled accordingly. Submissions provided by ARC members outside of the 15 day period will be considered on a case by case basis by the AF Safety Center but will not exceed the 45 day period allocated for Memorandum of Final Evaluation inputs.

## Chapter 9

### FOLLOW-UP ACTIONS

**9.1. General Information.** Follow-up actions conducted by reviewing authorities, Convening Authorities, and the AF Safety Center are required to ensure program compliance, hazard mitigation, and trending validity. These three areas are core safety functions required at every level. Safety offices will use the AF Safety Automated System to monitor the status of open events, recommendations, mishaps requiring comments for the Memorandum of Final Evaluation, and in preparation for Hazard Review Boards presented to Command commanders.

**9.2. Memorandum of Final Evaluation Message.** The Memorandum of Final Evaluation message is the AF/SE's independent final evaluation and position on causes, findings, recommendations, and DoD Human Factors Analysis and Classification System codes. This is the AF/SE's direct communication to the CSAF on what happened in the mishap. It is published in the AF Safety Automated System with other messages related to the mishap and does not replace the investigation's final message or final supplemental message. The investigation's final message (or final supplemental message) and all Tabs remain available in the AF Safety Automated System as part of the official record.

9.2.1. The AF Safety Center will normally publish a Memorandum of Final Evaluation on all on-duty Class A and select B mishap safety reports and Nuclear Surety Investigations (accidents and incidents) within 90 days after release and acceptance of the final or final supplemental message.

9.2.2. The following individuals/organizations will review Class A and B mishap final messages/formal reports and input their comments, if applicable, into the AF Safety Automated System within 45 calendar days after each final or final supplemental message release by the Convening Authority. If no comments are received, the AF Safety Center will assume those eligible to comment concur with the results of the investigation. The Convening Authority staff should provide comments even if "concur as written" is the only applicable evaluation. All comments for the Memorandum of Final Evaluation should be accomplished using the template located in the AF Safety Automated System Pubs & Refs section.

9.2.2.1. Convening Authority.

9.2.2.2. Lead command of weapons system.

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

9.2.2.4. AFRC or ANG for all events that involve their personnel, property, or equipment.

9.2.2.5. Designated action agencies.

9.2.2.6. Commander of the event wing.

9.2.2.7. Individual(s) found causal in the formal report may review the final message.

9.2.2.8. AF agencies outside the investigating command if their functions were involved in the event (e.g. AFFSA/XA for air traffic services and airfield management).

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

9.2.3. 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:

9.2.3.1. Reopen the safety investigation.

9.2.3.2. Include the new facts as a Comments for Memorandum of Final Evaluation (MOFE) message submitted by safety staffs via the AF Safety Automated System by selecting the "Provide Comments for MOFE" link on the mishap of interest.

9.2.4. The comment period is open for 45 calendar days following the release of the final message or final supplemental message. Comments received after the 45-calendar-day deadline cannot be entered into the AF Safety Automated System and may not be considered in the Memorandum of Final Evaluation process. Memorandum of Final Evaluation comments outside the 45-day timeline may be submitted via e-mail to the appropriate AF Safety Center division or discipline (e.g. AFSEC/SEFO), but are considered unofficial comments and may not be used during the Memorandum of Final Evaluation deliberation.

9.2.5. Memorandum of Final Evaluation comments will only address findings, recommendations, other findings of significance, other recommendations of significance, OPRs and office of collateral responsibilities, and DoD Human Factors Analysis and Classification System coding.

9.2.5.1. Provide comments about findings to address procedural errors (see Chapter 6), changes to causal/not causal, additions/deletions, or to add information not available to the Safety Investigation Board. Provide specific information to support the requested changes.

9.2.5.2. Provide comments about recommendations to address procedural errors (see Chapter 6), changes to OPRs and offices of collateral responsibility, or to make additions/deletions. If changes to offices of OPRs and offices of collateral responsibility are required, provide contact information for the new OPR and office of collateral responsibility, to include the name, rank/GS grade, office symbol, DSN or commercial phone number, and government e-mail address. Additionally, comments may address the recommendation narrative to clarify intent or correct errors. If the actions directed in the recommendation have already been accomplished, provide documentation of actions taken (see paragraph 9.3.4.), and the Memorandum of Final Evaluation team will close the recommendation during the Memorandum of Final Evaluation process. Provide specific information to support the requested changes.

9.2.6. If the Memorandum of Final Evaluation adds a person to a causal finding or significantly changes an individual's role in the findings, the AF Safety Center division's process owner will prepare a causal letter for the respective division chief's signature. The division's process owner will notify the Convening Authority safety office, who in turn will

notify the event unit (wing or equivalent) Chief of Safety and must provide the individual an opportunity to submit comments, following the procedures in paragraph 8.6. In addition to these procedures, a draft Memorandum of Final Evaluation will also be provided solely for the individual to review (not for further comments by reviewing authorities). The Memorandum of Final Evaluation will not be released by the AF Safety Center until after the individual has had an opportunity to respond but no later than 15 calendar days after the Command has been notified unless a delay is requested and approved.

9.2.7. AF/SE is the releasing authority for Class A Memorandums of Final Evaluation. AFSEC/CV is the releasing authority for Class B Memorandums of Final Evaluation. The AF Safety Center will release the Memorandum of Final Evaluation via the Air Force Safety Automated System. When transmitted, the Memorandum of Final Evaluation becomes the official AF position on findings, recommendations, and DoD Human Factors Analysis and Classification System codes.

9.2.8. A Memorandum of Final Evaluation is not prepared for engine-confined foreign object damage mishaps unless a formal report is required and/or significant human factors or procedural errors were involved.

### **9.3. Managing Recommendations.**

9.3.1. Safety offices will use the AF Safety Automated System to effectively manage updates and final disposition of recommendations and other recommendations of significance resulting from events.

9.3.2. The OPR must provide recommendation updates in the AF Safety Automated System every six months until closed. Some recommendation OPRs, especially at or below the wing level, do not have AF Safety Automated System accounts to provide semi-annual updates or closure requests. In these cases, it is the responsibility of the accountable wing/NAF/Command Director/Chief of Safety to ensure these actions are taken. For recommendations where the HAF is the OPR, HQ AF/SEI will facilitate updates and closure actions. Elements of an acceptable recommendation update include:

9.3.2.1. Actions planned or taken.

9.3.2.2. Results of development or testing.

9.3.2.3. Significant problems encountered.

9.3.2.4. Delays experienced.

9.3.2.5. Rationale and any supporting risk analysis to justify decisions made.

9.3.2.6. Concurrence and non-concurrence by other agencies.

9.3.2.7. Percentage of aircraft, equipment, etc., modified.

9.3.3. To request closure of a recommendation the following must be accomplished:

9.3.3.1. The OPR must request closure from the approval authority who determines if the closing action is acceptable. To determine closure approval authority for recommendations use Table 9.1.

9.3.3.2. For recommendations where the action taken is different from the proposed actions, or where no action is taken, a risk analysis must be accomplished prior to request for closure.

9.3.3.2.1. For Class A and B mishap and Nuclear Surety Investigation (accidents and incidents) recommendations, the OPR's Command commander or vice commander (or Hazard Review Board Chair/Program Executive Officer or Center commander/vice commander in AFMC) must concur with the risk analysis, accept the risk, and approve the request for closure. This risk acceptance is normally obtained through the Hazard Review Board staffing process. If the lead MAJCOM is not the OPR, the current OPR will coordinate and reassign the recommendation to the lead MAJCOM with an appropriate risk analysis and recommendation to allow the lead MAJCOM Director/Chief of Safety office to brief the commander and gain risk acceptance. If there is no lead MAJCOM, the OPR will coordinate the risk analysis and recommendation through HQ AF/SEI to obtain documented AF Safety Center concurrence.

9.3.3.2.2. For Class C, D, and E mishaps, and other events, the Command will develop a process to address risk acceptance. For these events, the OPR's commander (or 2-letter director for recommendations at MAJCOM/NAF/Field Operating Agency/Direct Reporting Unit level) must concur with the risk analysis, and accept the risk, prior to approving closure. **Examples:** If the OPR for a Class C recommendation is ACC/A4M and they choose an alternate method of mitigating the hazard, the ACC/A4 must approve the closing action. If the OPR is in the Maintenance Group, the Wing Commander must approve the closing action.

9.3.3.2.3. For recommendations where the OPR is the HAF, the HAF 2-letter must approve the closing action. **Example:** If the OPR is AF/A3O and they choose an alternate method of mitigating the hazard or deem it's not feasible to implement the recommendation, the AF/A3 must approve the closing action.

**Table 9.1. Closure Approval Authority for Recommendations.**

		Closure Approval Authority for Recommendations:						
		If the OPR is:						
		HAF	FOA/DRU	MAJCOM	NAF	Wing	Group	Sqdn
Event Type		Closure Approval Authority is:						
Mishap Class	A	AFSEC/CV	AFSEC/ CV if On-Duty Mishap MAJCOM if Off-Duty Mishap					
	B							
	C							
	D							
	E							
Incident, Hazard, & Safety Study		AFSEC/CV	FOA/DRU/SE	MAJCOM/SE	NAF/SE	Wing/SE		
Nuclear								

9.3.4. When requesting closure in the AF Safety Automated System the OPR must upload supporting documentation (e.g. affected technical order pages, risk analysis, training plans, Hazard Review Board results). The following are acceptable closing actions with proper annotation in the AF Safety Automated System:

9.3.4.1. 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 (e.g. Technical Order 1B-2A-1), the date of the publication, and the affected page numbers.

9.3.4.2. Recommended modifications to all applicable systems or items were completed. Since effective mishap prevention requires identifying and tracking existing hazards, recommendation closure should not be requested for open time compliance technical order actions until the time compliance technical order is complete. In most cases, the design change must have been implemented on all affected systems to warrant closure.

9.3.4.3. 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.

9.3.4.4. Recommended changes to training were completed. If the training changes were captured in a publication, see paragraph 9.3.4.1. 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.

9.3.4.5. For recommendations closed without action taken (including no action taken), document the risk analysis and acceptance in the AF Safety Automated System.

**Example:** “In lieu of a software update, the MAJCOM vice commander accepted the risk associated with not implementing this recommendation during the Hazard Review Board on 13 Oct XX. See attached risk analysis under “attached files” for supporting details.”

9.3.4.6. 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.

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

9.3.6. The approval authority will approve closure only after all actions have been completed and properly annotated.

9.3.7. HAF-level OPRs will coordinate with HQ AF/SEI to facilitate recommendation status updates and closure requests in the AF Safety Automated System. Upon completion of actions, HQ AF/SEI will request closure through the AF Safety Center on behalf of the HAF OPR.



9.3.8. Each Command will establish a Hazard Review Board. Hazard Review Boards will include all open recommendations from Class A and B mishap and Nuclear Surety Investigations (accidents and incidents) assigned to an OPR within the specific command, not just at the command level. The purpose of a Hazard Review Board is to address hazards throughout the command regardless of the organizational level of the OPR. HQ AF/SEI will follow this guidance for HAF-level recommendations. **Exception:** AFMC is exempt from conducting a Hazard Review Board at the MAJCOM level. Centers under AFMC shall provide results to the AFMC Director/Chief of Safety not later than 1 April and 1 October every year. The AFMC Director/Chief of Safety will comply with paragraph 9.3.8.4.

9.3.8.1. The lead MAJCOM/A3 will brief and advocate Safety Investigation Board recommendations at the flight manual and technical order review boards. For Aviation Class A and B mishaps, if recommended changes are disapproved by the flight manual or technical order review boards, the appropriate directorate will brief the MAJCOM vice commander on disapproval rationale at the Hazard Review Board and the MAJCOM commander or vice commander will accept the risk of not implementing the safety recommendation. However, the MAJCOM commander or vice commander may direct the implementation of a safety recommendation regardless of the flight manual or technical order review board's decision.

9.3.8.2. The Hazard Review Board will meet no less than once every six months. All recommendation updates approved at the Hazard Review Board will be input into the AF Safety Automated System within 30 calendar days.

9.3.8.3. At a minimum, the Command Director/Chief of Safety will provide the commander or vice commander the following information through the Hazard Review Board process:

9.3.8.3.1. All open Class A and B mishap and Nuclear Surety Investigation (accidents and incidents) recommendations to include latest status updates and changes since previous Hazard Review Board report to the AF Safety Center. The Hazard Review Board should also include recommendations from mishaps that have not yet been through the Memorandum of Final Evaluation process.

9.3.8.3.2. A risk analysis for recommendations requiring a risk acceptance.

9.3.8.3.3. Identification of recommendations open over two years with rationale.

9.3.8.3.4. Closure actions since the last Hazard Review Board.

9.3.8.3.5. Summary of recommendations closed without action per mission design series/equipment etc. where risk was accepted.

9.3.8.4. The Command will create a memorandum for record signed by the Command Director /Chief of Safety after every Hazard Review Board. This memorandum for record will be maintained by the Command safety office and reviewed by the AF Safety Center during Command Safety Evaluations or whenever requested. The memorandum will contain:

9.3.8.4.1. Number of recommendations closed since the last Hazard Review Board.

9.3.8.4.2. Number of open recommendations.

- 9.3.8.4.3. Number of recommendations open for longer than two years.
- 9.3.8.4.4. Number of recommendations closed with accepted risk per mission design series.
- 9.3.8.5. NAF and Wing safety staffs are encouraged to establish a similar Hazard Review Board process to close recommendations from Class C-E mishaps, incident and hazard reports, and safety studies.

JOHN T. RAUCH JR., Major General, USAF  
Chief of Safety

**Attachment 1****GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 10-206, *Operational Reporting*, 11 June 2014

AFI 10-220, *Contractor's Flight and Ground Operations*, 21 August 2013

AFI 10-2501, *Air Force Emergency Management Program*, 19 April 2016

AFI 11-215, *USAF Flight Manuals Program (FMP)*, 22 December 2008

AFI 16-402, *Aerospace Vehicle Programming, Assignment, Distribution, Accounting, and Termination*, 30 May 2013

AFI 20-110, *Nuclear Weapons-Related Materiel Management*, 23 October 2014

AFI 21-103, *Equipment Inventory, Status and Utilization Reporting*, 16 December 2016

AFI 23-111, *Management of Government Property in Possession of the Air Force*, 29 October 2013

AFI 24-203, *Preparation and Movement of Air Force Cargo*, 13 July 2017

AFI 32-2001, *Fire Emergency Services (FES) Program*, 27 February 2014

AFI 33-360, *Publications and Forms Management*, 1 December 2015

AFI 34-501, *Mortuary Affairs Program*, 18 August 2015

AFI 35-104, *Media Operations*, 22 May 2017

AFI 35-109, *Visual Information*, 1 June 2017

AFI 36-3002, *Casualty Services*, 20 June 2017

AFI 41-210, *Tricare Operations and Patient Administration Functions*, 6 June 2012

AFI 48-145, *Occupational and Environmental Health Program*, 22 July 2014

AFI 48-151, *Thermal Injury and Prevention Program*, 7 April 2016

AFI 51-503, *Aerospace and Ground Accident Investigations*, 14 April 2015

AFI 62-601, *USAF Airworthiness*, 11 June 2010

AFI 63-101/20-101, *Integrated Life Cycle Management*, 9 May 2017

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

AFI 65-601 Volume 2, *Budget Management for Operations*, 14 July 2017

AFI 90-508, *Air Force Civilian Drug Demand Reduction Program*, 28 August 2014

AFI 90-802, *Risk Management*, 11 February 2013

AFI 91-202, *The US Air Force Mishap Prevention Program*, 24 June 2015

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

AFI 91-225, *Aviation Safety Programs*, 26 January 2015

AFI 99-151, *Air Launched Munition Analysis Group (ALMAG)*, 12 May 2017

AFMAN 10-2504, *Air Force Incident Management Guidance for Major Accidents and Natural Disasters*, 13 March 2013

AFMAN 91-221, *Weapons Safety Investigations and Reports*, 21 August 2015

AFMAN 91-222, *Space Safety Investigations and Reports*, 22 December 2016

AFMAN 91-223, *Aviation Safety Investigations and Reports*, 16 May 2013

AFMAN 91-224, *Ground Safety Investigations and Reports*, 24 March 2015

AFMD 1, *Headquarters Air Force (HAF)*, 5 August 2016

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

AFPD 91-2, *Safety Programs*, 1 May 2017

AIR STD 85/02A, *Investigation of Aircraft/Missile Accidents/Incidents (with US reservations)*, 20 February 2007

Defense Contract Management Agency Instruction 8210.1, *Contractor's Flight and Ground Operations*, 5 April 2017

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

DoD 7000.14-R, *Financial Management Regulation, Volume 5*, November 2017

DoDD 5530.3, *International Agreements*, 11 June 1987

DoDM 5200.01, Volume 4, *DoD Information Security Program: Controlled Unclassified Information (CUI)*, 24 February 2012

DoDM 5400.07, *DoD Freedom of Information Act (FOIA) Program*, 25 January 2017

DoDI 6055.01, *DoD Safety and Occupational Health (SOH) Program*, 14 October 2014

DoDI 6055.07, *Mishap Notification, Investigation, Reporting, and Record Keeping*, 6 June 2011

DoDI 6055.04, *DoD Traffic Safety Program*, 20 April 2009

HAF MD 1-46, *Chief of Safety*, 10 December 2013

NATO Standardized Agreement 3101, *Exchange of Safety Information Concerning Aircraft and Missiles*, 3 November 2016

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

NATO Standardized Agreement 3318, *Aeromedical Aspects of Aircraft Accident and Incident Investigation*, 11 November 2013

NATO Standardized Agreement 3531, *Safety Investigation and Reporting of Accident/Incidents Involving Military Aircraft, Missiles, And/Or UASs*, 8 April 2013

Technical Order 00-5-1, *AF Technical Order System*, 14 June 2016

Technical Order 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution*, 1 September 2015

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

29 CFR 1960 *et seq.*, *Basic Program Elements for Federal Employees OSHA*

### ***Prescribed Forms***

AFVA 91-218, *Privileged Safety Information (PSA) Cover Sheet*

### ***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*

AF Form 978, *Supervisor Mishap Report*

AFTO Form 22, *Technical Manual Change Recommendation and Reply*

DD Form 250, *Material Inspection and Receiving Report*

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

OSHA Form 300A, *Summary of Work-Related Injuries and Illnesses*

OSHA Form 301, *Injury and Illness Incident Report*

US Department of Labor Form LS-1, *Request for Examination and/or Treatment*

US Department of Labor Form LS-201, *Notice of Employee's Injury or Death*

US Department of Labor Form LS-202, *Employer's First Report of Injury or Occupational Illness*

### ***Terms***

**Aero Club Aircraft**—All aircraft assigned to an 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 aircraft on a loan basis.

**Aerospace Vehicles**—DoD aircraft, remotely piloted aircraft/unmanned aerial system, missiles, and space vehicles.

**AF Launch**—Any space launch operation conducted with significant oversight or insight by the AF and not subject to licensing requirements of 14 CFR Part 415. The AF may or may not be the space system owner.

**Air Reserve Components (ARC)**—All units, organizations, and members of the ANG and AFR on active duty, on active duty for training, or inactive duty for training, and ANG and AFR technicians; include ANG and AFR property and equipment.

**Airfield Operations Personnel**—Air traffic control, airfield management, and air traffic control and landing systems personnel.

**Causal Finding**—Findings that identify actions or inactions in the mishap sequence that resulted in damage or injury. They are identified with the word “Causal” at the start of the text of the finding and supported by causal factors within the report analysis.

**Cause**—A cause is a deficiency, which if corrected, eliminated, or avoided, would likely have prevented or mitigated the mishap damage or 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 DoD 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 results 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.

**Class A Mishap**—A mishap resulting in one or more of the following:

1. Direct mishap cost totaling \$2,000,000 or more.
2. A fatality or permanent total disability.
3. Destruction of a DoD aircraft.
4. Permanent loss of primary mission capability of an AF space vehicle.

**Class B Mishap**—A mishap resulting in one or more of the following:

1. Direct mishap cost totaling \$500,000 or more but less than \$2,000,000.
2. A permanent partial disability.
3. Inpatient hospitalization of three or more personnel. This does not include individuals hospitalized for observation, diagnostic, or administrative purposes that were treated and released.
4. Permanent degradation of primary or secondary mission capability of a space vehicle or the permanent loss of secondary mission capability of a space vehicle.

**Class C Mishap**—A mishap resulting in one or more of the following:

1. Direct mishap cost totaling \$50,000 or more but less than \$500,000.
2. Any injury or occupational illness that causes loss of one or more days away from work not including 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 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.
3. An occupational injury or illness resulting in permanent change of job.
4. Permanent loss or degradation of tertiary mission capability of a space vehicle.

**Class D Mishap**—An on-duty mishap resulting in one or more of the following:

1. Direct mishap cost totaling \$20,000 or more but less than \$50,000.
2. A recordable injury cost or illness not otherwise classified as a Class A, B, or C mishap.
3. Any work-related mishap resulting in a recordable injury or illness not otherwise classified as a Class A, B, or C mishap. These are cases where, because of injury or

occupational illness, the employee only works partial days, has restricted duties (does not include medical restriction from flying or special operational duties by AF Form 2992) or was transferred to another job, required medical treatment greater than first aid, or experienced loss of consciousness (does not include G-loss of consciousness). In addition, a significant injury (e.g. fractured/cracked bone, punctured eardrum, any laser eye injury) 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.

**Class E Mishap**—A work-related mishap that falls below Class D criteria. Most Class E mishap reporting is voluntary; however see discipline-specific safety manuals for a list of events requiring mandatory reporting.

**Combat Support and Training**—A mishap associated with a military exercise (such as ORE, RED FLAG, etc.) to maintain or increase individual or collective combat and peacekeeping skills (combat arms, martial arts, etc.).

**Command**—For purposes of this instruction, includes MAJCOMs, and MAJCOM-like entities (higher headquarters) to include ANG, AFRC, Direct Reporting Units, and Field Operating Agencies.

**Commodity**—For purposes of this instruction, an aircraft being transported by means other than under its own power (e.g. a remotely piloted aircraft inside a shipping container or a helicopter being transported inside a cargo aircraft).

**Competent Medical Authority**—A licensed healthcare provider awarded with regular clinical privileges for independent practice within the scope of their practice by the healthcare facility responsible for the provider's place of duty. 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. 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.

**Convening Authority (CA)**—The individual who has the authority to order a safety investigation.

**Covered Entity**—A health plan, a health care clearinghouse, or a health care provider.

**Critical Profile**—A mission profile exceeding system limitations based on system specifications or other program documentation.

**Days Away From Work**—Those days when a person loses 1 or more work days as a result of an injury or illness, starting with the day after the injury occurred or the illness began and including calendar days the person was unable to work, regardless of whether the person was scheduled to work on those days. For military personnel, days away from work for on- and off-duty injuries and occupational illnesses include inpatient hospitalization, medical restrictions to quarters, convalescent leave, and commander directed removal from duties.

**Days of Restricted Work or Transfer to Another Job**—Days on which a person is working but restricted from completing assigned tasks, works less than a full day or shift, or is transferred to another task to accommodate the injury or illness. Calendar days not scheduled to work are included in the count of days. Count of days is stopped when the person is either returned to their pre-injury or pre-illness job or permanently assigned to a job that has been modified or permanently changed to eliminate the routine functions the person was restricted from performing. For military personnel, restricted work or transfer to another job includes limited- and light-duty assignments.

**Deficiency**—A characteristic or condition that fails to meet a standard, or is not in compliance with a requirement, specification, instruction, or manual.

**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 has been executed to certify that the DoD 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 DoD civilian jobs; 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 US 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 US Forces' foreign nationals. Although the host government is the official employer for the foreign national personnel, it grants operational control to the US 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 Title 10 of the US Code; National Guard personnel under the provisions of Title 32 of the US Code; 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**—All Senior Executive Service, GS, wage board, including ANG and AFRC technicians, unless in military duty status. Also includes NAF fund employees who are not military personnel working part time, Youth Opportunity Program and Student Assistance Program employees, and foreign-national civilians employed by AF (AF Foreign Nationals).

**Department of the Air Force (DAF) Military Personnel**—AF personnel on active duty with the AF or ANG and AFR personnel on military duty status. Includes USAF Academy cadets, USAF Academy Preparatory School cadet candidates and Reserve Officer Training Corps cadets engaged in directed training activities. Includes members of other US military services serving on extended active duty with the AF or foreign-national military personnel assigned to the AF.

**Destroyed Aircraft/Remotely Piloted Aircraft/Unmanned Aerial System**—An aircraft/remotely piloted aircraft/unmanned aerial system that cannot be repaired and returned to service. A damaged aircraft/remotely piloted aircraft/unmanned aerial system not repaired is not automatically a "destroyed" aircraft/remotely piloted aircraft/unmanned aerial system. The decision not to return a damaged aircraft/remotely piloted aircraft/unmanned aerial system to service is independent of the mishap class. When the aircraft/remotely piloted aircraft/unmanned aerial system 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. Detailed procedures for obtaining disposition recommendations from the program manager can be found in AFI 16-402, *Aerospace Vehicle Programming, Assignment, Distribution, Accounting, and Termination*.

**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 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 definition of Permanent Partial Disability or Permanent Total Disability.

**Domestic Object Damage**—Damage to an aircraft component or assembly, including engines, due to an inherent internal failure of a component or assembly. Domestic Object Damage does NOT include damage caused from the ingestion or presence of an object foreign or external to the component or assembly.

**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, an extraction system, or a crew module.

**Engine**—Thrust or torque producing machinery for manned and unmanned aerial vehicles to include cases, rotational and static hardware for turbo-machinery. The term “engine” also includes “internal combustion” reciprocating machinery. The “engine” includes attached gearboxes and accessories necessary for operation and control of the thrust or torque producing machinery and any thrust augmentation systems. The term “engine” does not include reduction gearboxes, propellers or propeller control devices.

**Engine-Confined**—Applies when an aircraft 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 D damage external to the engine. If the total cost of all damage external to the engine is equal to or greater than the Class D damage cost threshold, then the mishap is not engine-confined, regardless of the comparative extent of engine damage cost.

**Engine-Confined Foreign Object Damage Mishap**—A mishap in which an aircraft turbine engine experiences reportable foreign object damage (Class C or higher) that is confined to the engine and integral engine components. Damage is considered foreign object damage if it is caused by inanimate objects external to the engine (e.g. rocks, tools, safety wire, ice). Damage is considered confined to the engine if there is less than Class D damage external to the engine. If the total cost of all damage external to the engine is equal to or greater than the Class D damage cost threshold, then the mishap is not engine-confined, regardless of the comparative extent of engine damage cost.

**Event**—A broad term used to describe an occurrence, a series of occurrences, or a condition which has implications for the safety community. Events include Mishap, Nuclear Surety, Incident, Hazard, and Safety Study.

**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.

**FAA Licensed Launch**—Any commercial launch that has been issued a license by the FAA Office of Commercial Space Transportation.

**Fatal Injury**—(Class A)—Injuries resulting in death.

**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 event.

**Fire Related Mishap**—A mishap with reportable damage to real property or equipment or reportable injury to AF personnel resulting from fire, but does not involve a DoD aircraft, DoD remotely piloted aircraft/unmanned aerial system weapon system, or explosives. Fire mishaps

are categorized as industrial mishaps and include non-AF personnel when AF 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:

1. 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);
2. Administering tetanus immunizations (other immunizations, such as Hepatitis B vaccine or rabies vaccine, are considered medical treatment);
3. Cleaning, flushing or soaking wounds on the surface of the skin;
4. 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, medical glue, etc., are considered medical treatment);
5. Using oxygen per protocol for suspected conditions or events (chemical exposure, smoke in a cockpit, decompression sickness, etc.). Oxygen prescribed by a physician or medical professional for confirmed conditions constitutes more than first aid;
6. Using politzer bag or comparable device for ear and sinus block;
7. Using hot or cold therapy;
8. 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);
9. Using temporary immobilization devices while transporting an accident victim (e.g. splints, slings, neck collars, back boards);
10. Drilling of a fingernail or toenail to relieve pressure, or draining fluid from a blister;
11. Using eye patches;
12. Removing foreign bodies from the eye using only irrigation or a cotton swab;
13. Removing splinters or foreign material from areas other than the eye by irrigation, tweezers, cotton swabs or other simple means;
14. Using finger guards;
15. Using massages (physical therapy or chiropractic treatment are considered medical treatment); or
16. Drinking fluids for relief of heat stress.
17. See 29 CFR 1904 for further guidance for injury and illness classifications.

**Foreign Object Damage**—Damage is considered foreign object damage if it is caused by inanimate objects external to the engine/aircraft/remotely piloted aircraft/unmanned aerial system (e.g. rocks, tools, safety wire, ice).

**Formal Report**—The factual and analytical information about mishaps that are uploaded as Tabs in the AF Safety Automated System. The formal report also includes data uploaded into the AF Safety Automated System that is not included in the Tabs.

**Friendly Fire**—A circumstance in which authorized members of a US or friendly military force, US or friendly official government employees, US DoD or friendly nation contractor personnel, and nongovernmental organizations or private volunteer organizations, are, while accompanying or operating with the US Armed Forces, are mistakenly or accidentally killed or injured in action by US or friendly forces actively engaged with an enemy or directing fire at a hostile force or what is thought to be a hostile force. This also includes incidents that result in only damage or destruction of US or friendly nation's military property mistakenly or accidentally damaged in action by US or friendly forces actively engaged with an enemy, or directing fire at a hostile force or what is thought to be a hostile force.

**Government Motor Vehicle**—A motor vehicle that is owned, leased, or rented by a DoD Component (not individuals) primarily designed for over-the-road operations; and whose general purpose is the transportation of cargo or personnel. Examples of government motor vehicles are passenger cars, station wagons, sport utility vehicles, vans, ambulances, buses, motorcycles, trucks, tractor-trailers, rental vehicles authorized by official travel orders, and General Service Administration 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 government motor vehicles.

**Government Vehicle Other**—Vehicles designed primarily for off-the-highway operation such as construction-tracked vehicles, forklifts, road graders, agricultural-type wheeled tractors, and aircraft tugs. Includes military combat and tactical vehicles that are owned, leased, or rented by a DoD Component (not individuals) (e.g. tanks, self-propelled weapons, armored personnel carriers, amphibious vehicles ashore, and high-mobility multipurpose wheeled vehicles).

**Greater Than First Aid**—Any action in excess of First Aid (see First Aid definition).

**Ground Mishap**—For the purposes of this instruction, a mishap that falls into one of the following mishap subcategories: Industrial and Occupation, Sports, Recreation and Fitness, Combat Support and Training, and Miscellaneous.

**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; or under test by a DoD Component. Drones (e.g. target, decoy, surveillance), ballistic or semi ballistic vehicles, and artillery projectiles are not considered guided missiles.

**Guided Missile Mishap**—An AF 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, damage, or occupational illness.

**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 as classified in the Occupational Safety and Health Administration Forms for Recording Work-Related Injuries and Illnesses booklet.

**Incident**—A planned or unplanned occurrence or series of occurrences resulting in injury or damage that does not meet Mishap or Nuclear Surety reporting criteria.

**Industrial and Occupational Mishap**—A ground mishap involving operations similar to those performed in private industry. Includes, but is not limited to, equipment maintenance, facility construction and maintenance, health care provision, laboratory research, and administrative and clerical tasks.

**In-Flight Shutdown**—Any engine shutdown in-flight, either due to an engine malfunction or by the aircrew following flight manual procedures.

**Injury**—A traumatic wound or other condition of the body caused by external force or deprivation (e.g. fractures, lacerations, sprains, dislocations, concussions, compressions, drowning, suffocation, exposure, hot or cold injury, dehydration, hypobaric chamber related decompression sickness or illness, single-exposure/single-shift hearing loss), 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 as classified in the Occupational Safety and Health Administration Forms for Recording Work-Related Injuries and Illnesses booklet.

**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 taxis 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.

**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.

**Launch Vehicle**—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.

**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, 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 because of a work-related injury or illness. Do not count the day of the injury/illness or the day the individual returns to work.

**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**—An unplanned occurrence, or series of occurrences, that results in damage to Department of Defense (DoD) property; occupational illness to DoD personnel; injury to on- or off-duty DoD military personnel; injury to on-duty DoD civilian personnel; or damage to public or private property, or injury or illness to non-DoD personnel, caused by DoD activities. Mishaps are classified by total direct mishap cost and the severity of injury/occupational illness.

**Missile Support Equipment**—Any component of ground launched missile systems used to handle or transport missiles or missile components. Missile Support Equipment 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).

**Musculoskeletal Disorders**—Injuries or disorders of the muscles, nerves, tendons, joints, cartilage, and disorders of the nerves, tendons, muscles and supporting structures of the upper and lower limbs, neck, and lower back that are caused, precipitated or exacerbated by sudden exertion or prolonged exposure to physical factors such as repetition, force, vibration, or awkward posture. This definition specifically excludes those conditions such as fractures, contusions, abrasions, and lacerations resulting from sudden physical contact of the body with external objects.

**Natural Phenomena Related**—Injury to persons or damage to DoD property resulting from 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.

**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, AF personnel only worked partial days, were placed on restricted work, were transferred to another job, required medical treatment greater than first aid, lost consciousness, or were diagnosed with a significant injury or illness/disease by a physician or other licensed health care professional. Significant injuries or illnesses include those that do not result in death, days away from work, restricted work or job transfer, medical treatment greater than first aid, or loss of consciousness.

**Non-Accepted Equipment/Vehicles**—Non-delivered equipment/vehicles for which the Government has assumed responsibility; DD Form 250 HAS NOT been executed.

**Non-Department of the AF Civilian Personnel**—Persons employed by host-nation agencies, and doing work such as public works or general engineering on AF installations, are not AF

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 Department of the AF 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.

**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; or 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 Surety**—The program of material, personnel, and procedures that contribute to the safety, security, and control of nuclear weapons preventing accidents, incidents, loss, or unauthorized accidental use.

**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 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**—Policies, procedures, controls, and actions that encompass safety, security, and control measures, which ensure there will be no nuclear weapons accidents, incidents, unauthorized detonation, or degradation of weapon effectiveness during its Stockpile-to-Target Sequence.

**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 or Diagnostic Care**—Inpatient hospitalization or restriction from assigned work activities for observation or diagnosis provided no treatment or medication is given for the

suspected injury or occupational illness, and a competent medical authority determines the individual could have returned to his or her normal job without impairment or disability, or where an individual is temporarily restricted from regularly assigned duties to prevent exceeding time-weighted exposure limits. This care does not create a “lost-time case,” “no lost-time case,” or “first-aid case.”

**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 considered off-duty when they are not on-duty. See “on-duty” definition for further clarification. DoD personnel are off-duty when participating in base team sporting activities in a permissive TDY status. USAF Academy Cadets participating in inter-collegiate, intramural sports, and club activities are off-duty. Personnel commuting prior to or after their duty day are considered off-duty for mishap reporting purposes.

**Note 1:** This definition is for mishap reporting purposes only and has no relation to compensability or line-of-duty determination.

**Note 2:** A mishap involving both on- and off-duty military personnel in the same mishap will be categorized as an on-duty mishap.

**Note 3:** Reserve and National Guard personnel performing inactive duty training (e.g. drill, Additional Flight Training Program flights) 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 or if the site of the inactive duty training is outside reasonable commuting distance of the member's residence.

**On-Duty**—DoD personnel are on-duty when: their activities are work-related, i.e., 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, for Occupational and Health Administration recording purposes, is presumed for injuries and illnesses resulting from events or exposures occurring in the work environment, unless one of the following exceptions specifically applies:

- (1) 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.
- (2) The injury or illness involves signs or symptoms that surface at work but result solely from a non-work-related event or exposure that occurs outside the work environment.
- (3) The injury or illness results solely from voluntary participation in a wellness program or in a medical, fitness, or recreational activity, such as blood donation, physical examination, flu shot, exercise class, racquetball, or baseball.
- (4) The injury or illness is solely the result of an employee eating, drinking, or preparing food or drink for personal consumption (whether bought on the supervisor's premises or brought in). For example, if the employee is injured by choking on a sandwich while in the supervisor's establishment, the case would not be considered work-related. If the employee is made ill by



ingesting food contaminated by workplace contaminants (such as lead), or gets food poisoning from food supplied by the supervisor, the case would be considered work-related.

(5) The injury or illness is solely the result of an employee doing personal tasks (unrelated to their employment) at the establishment outside of the employee's assigned working hours.

(6) The injury or illness is solely the result of personal grooming, self-medication for a non-work-related condition, or is intentionally self-inflicted.

(7) The injury or illness is caused by a motor vehicle accident and occurs on a company parking lot or company access road while the employee is commuting to or from work. Driving to and from lunch is not considered on-duty.

(8) The illness is the common cold or flu. Contagious diseases such as tuberculosis, brucellosis, hepatitis A, or plague are considered work-related if the employee is infected at work.

(9) The illness is a mental illness. Mental illness will not be considered work-related unless the employee voluntarily provides the supervisor 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.

Being transported by Department of Defense or commercial conveyance to perform officially assigned work is considered on-duty. (This includes travel in private motor vehicle or commercial conveyances while performing official duty, but not routine travel to and from work.) Work-relatedness is presumed for all activities aboard military vessels. Personnel on TDY, temporary additional duty, or otherwise on assignment away from their regular place of employment are also on-duty when their activities are work-related. See 29 CFR 1904, paragraph 1904.5(b)(6)(i) 1904.5(b)(6) for more detailed information on “home away from home” and “detour travel for personal reasons” guidance.

**Operations-Safety Team**—Collaboration between the operations and safety staffs that employs proactive risk mitigation in flight operations and activities. It augments the existing training and standardization/evaluation functions by incorporating legacy and emerging data sources into a structure of regular review to adjust training, policy, and guidance to meet the dynamic nature of aviation operations.

**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; avulsion; 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.

**Physical Training**—Development and care of the body using a wide variety of strength building, cardio training, endurance, and flexibility activities.

**Pre-Launch Mishap**—Space mishaps occurring during ground handling, processing, and transportation operations.

**Pre-existing 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**—A non-commercial vehicle that is neither a government motor vehicle nor government vehicle, other. A vehicle normally registered for highway use.

**Private Motor Vehicle Event**—A motor vehicle event, regardless of the identity of the operator, that does not involve a government motor vehicle or government vehicle, other, 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 caused by private motor vehicle(s) to bicyclists and pedestrians in the traffic environment are included in this category.

**Privilege**—A common law doctrine or statutory rule of evidence that protects certain communications and products from being used as evidence in court or otherwise released.

**Privileged Safety Information**—Information that is reflective of a deliberative process in a mishap investigation or given to a safety investigator pursuant to a promise of confidentiality, which the safety privilege protects from being released outside safety channels or from being used for any purpose except mishap prevention. For those types of investigations (Class A-E, Nuclear Surety, certain safety studies that used privileged source information, it includes products such as draft and final findings, evaluations, opinions, preliminary discussions, conclusions, mishap causes, recommendations, analyses, and other material that would reveal the deliberations of safety investigators, including reviews and endorsements. It also includes information given to a safety investigator pursuant to a promise of confidentiality and any information derived from that information or direct or indirect references to that information.

**Program Manager**—The Program Manager is the designated individual with the responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user's operational needs. The Program Manager shall be accountable for credible cost, schedule, and performance reporting and analysis to the milestone decision authority, and have responsibility and authority to accomplish objectives for the total life cycle of the program.

**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. Mishaps/Incidents involving property damage will be considered and reported as on-duty. This includes public and private property damage caused by AF operations. **Exception:** Replacement of component parts due to normal wear and tear, which is beyond the scope or definition of the affected time between overhaul of component, and when any associated damage is confined to the component part. This exemption only applies to items that are normally used until they fail or until predetermined wear limits are reached. The need for replacement may not be evident until malfunction or failure of the part. Resultant damage to other components is reportable. If investigation determines damage is due to normal wear and tear or aging, the event is not reportable.

**Propulsion System**—A system that provides a propelling force to the aircraft. This includes reciprocating and turbo-machinery engines whose primary purpose is for propulsion, reduction gearboxes, propellers, propeller control devices and ducted or un-ducted fans or prop-fans.

**Protected Health Information**—Any individually identifiable health information that is maintained or transmitted in any form or medium (paper, electronic, etc.), as specified in 45 CFR 160.103 and DoD 6025.18-R.

**Radiological Mishap**—See definition of Reactor and Radiological Event.

**Reactor and Radiological Event**—Events 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.

**Reasonable Person**—A standard hypothetical person that acts in a manner society might expect of a normal person under the same or similar circumstances.

**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 taken to prevent a similar mishap or reduce its effects.

**Recordable Injury or Illness**—For civilian personnel, an occupational injury or illness meeting the recording requirements of 29 CFR 1904. For military personnel, an on-duty injury or occupational illness meeting the recording requirements of 29 CFR 1904 or an off-duty injury resulting in death or 1 or more days away from work.

**Recovery Operations Chief**—Individual in charge of recovering mishap wreckage.

**Remotely Piloted Aircraft**—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 remotely piloted aircraft furnished by a contractor or another Government Agency when operated by a DoD crew in official status and a DD Form 250 has been executed to certify that the DoD has accepted the vehicle. Remotely piloted aircraft covered by this instruction include, but are not limited to, the following: Tactical remotely piloted aircraft, such as the MQ-1 Predator or RQ-4 Global Hawk; Full Scale Aerial Target Remotely Piloted Vehicles, such as the QF-4, Subscale remotely piloted vehicles, such as the BQM-34 Firebee or MQM 107 Streaker; Buoyant remotely piloted aircraft, such as a tethered aerostat; Remotely Operated Aircraft, and Unmanned Combat Aerial Vehicles. When a Full Scale Aerial Target remotely piloted vehicle is carrying a person, it is a DoD aircraft, not a remotely piloted aircraft.

**Restricted Work**—The supervisor keeps the employee from performing one or more of the routine functions of their job, or from working the full workday they would otherwise have been scheduled to work or a physician or other licensed health care professional recommends that the employee not perform one or more of the routine functions of their job, or not work the full workday they would otherwise have been scheduled to work. For military members, assignment

of a Physical Training Waiver does not constitute restricted work unless it directly impacts one or more of the routine functions of their job.

**Safety Investigation**—A thorough assessment of the hazards, cause(s), and outcome of circumstances leading to a mishap or event.

**Safety Investigator**—An individual authorized and qualified to investigate a safety mishap or event. Examples include members of an Interim Safety Board, Safety Investigation Board or Single Investigating Officer, and members of a safety staff.

**Safety Privilege**—Term the AF uses to describe privileges recognized by the courts that protect safety information from release. It is an executive privilege afforded a head of an agency to protect information from release that would hamper the efficient operation of an important Government program and perhaps impair the national defense or security.

**Safety Report**—Safety reports include message reports (preliminary, status, final, and final supplemental), 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.

**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 Command and Control Systems**—Systems required to provide telemetry, tracking, commanding, mission data dissemination, data processing, communication and range support for space vehicles. Space command and control systems examples include the common user AF Satellite Control Network and other program-dedicated networks.

**Space Mishap**—An AF 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 (small satellites), orbiters, and payloads and their associated subsystems.

**Sports, Recreation, and Individual Fitness**—A mishap associated with an activity that requires physical exertion and skill that is governed by a set of rules or customs and often undertaken competitively and/or refreshes one's mind or body through activity that amuses or stimulates. Involves the activity of exerting muscles in various ways to keep fit through the performance of exercise. This includes all fitness activities that do not meet the criteria for command-directed or organized fitness programs. A mishap involving privately-owned recreational vehicles or

aircraft that are primarily being used as transportation at the time of a mishap rather than for sport or recreational purposes will be categorized as a Miscellaneous mishap.

**Note 1:** On-duty Sports, Recreation and Individual Fitness requires meeting all three of the mandatory requirements: superior directed place, time, and activity.

**Note 2:** This includes all superior directed fitness activities and the AF Fitness Assessment.

**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.

**Unique Space Support Equipment**—Systems, equipment and facilities required for processing, handling or transporting space systems and their components. Space support equipment 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 space support equipment.

**Unmanned Aerial System (UAS)**—The system whose components include the necessary equipment, network, and personnel to control a remotely piloted aircraft as defined above.

**USAF at Large**—An accounting code used for recording losses in the AF Safety Automated System, not a determination of investigative responsibility. Events 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 AF installation, prior service personnel on leave before reporting to initial permanent duty assignment, etc., are recorded to the “USAF At Large.” Also used for recording losses of non-accepted AF aerospace vehicles, engine-confined non-foreign object damage mishaps, and aerospace vehicles leased to a non-DoD organization for modification, maintenance, repair, test, contract training, or experimental ground mishaps and includes non-AF personnel when AF property or equipment fires cause injury.

**Weapons Mishap**—For the purposes of this instruction, a mishap that falls into one of the following mishap categories: nuclear, guided missile, explosives, small arms (on-duty only), and chemical agents, or directed energy.

**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.

**Workplace Violence**—Any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site. It ranges from threats and verbal abuse to physical assaults and even homicide.

**Work-Relatedness**—See definition of On-Duty.

**Attachment 2****ORGANIZATION CONTACT INFORMATION****A2.1. Contact Information within the AF Safety Center.****AFSEC/JA (Staff Judge Advocate)**

9700 G Avenue SE

Kirtland AFB NM 87117-5670

DSN: 246-0624/1559 or (505) 846-0624/1559

FAX DSN 263-0565 or (505) 853-0565

**AFSEC/SEH (Human Factors)**

9700 G Avenue SE

Kirtland AFB NM 87117-5670

DSN: 246-1753 or (505) 846-1753

**Safety Investigation Board Support Hotline**

DSN: 263-6175 or (505) 853-6715

After hours (505) 269-9583

**Technical Assistance**

DSN: 246-5867 or (505)-846-5867

After hours (505) 220-0183

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 AFSEC Technical Assistance Duty Officer.

**A2.2. Contact Information outside the AF Safety Center.****AFLOA/JACC**

DSN: 612-4620 or (240) 612-4620

FAX DSN: 612-5059 or (240) 612-5059

**Armed Forces Medical Examiner System Office of the Armed Forces Medical Examiner**

115 Purple Heart Drive

Dover AFB, DE 19902

DSN: 366-8648 Phone: (302) 346-8648 Fax: (302) 346-8819

**AF Nuclear Weapons Center**

1551 Wyoming Blvd SE Kirtland AFB, NM 87117

DSN: 246-6567 or (505) 846-6567

**DCMA**

HA SCMA Aircraft Operations

6350 Walker Lane, Suite 300

Alexandria, VA 22310

DSN: 328-1309 or (703) 428-1309

**DTRA NSO**

1680 Texas St SE

Kirtland AFB, NM 87118

(505) 846-8436

**FAA Combined Operations Center**

(202) 267-3333

**Military Surface Deployment and Distribution Command**

709 Ward Drive, Bldg 1990, ATTN: SDDC-SA

Scott AFB, IL 62225

Organizational e-mail address:

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.

**Occupational and Safety Health Administration**

24-hour toll-free hot line 1-800-321-OSHA (1-800-321-6742)

**SAF/FMC (AF Cost Analysis Agency)**

AFI 65-503, Table A10-1

DSN: 222-6001 or (703) 692-6001

DSN: 224-0453

**51 CBCS/SCHA (AFSPC's Hammer ACE)**

811 Fourteenth St., Bldg 1347

Robins AFB, GA 31098

NIPR: [HammerACE@Robins.AF.Mil](mailto:HammerACE@Robins.AF.Mil)

SIPR: [51CBCSSCHA.Hammerace@AFMC.AF.Smil.Mil](mailto:51CBCSSCHA.Hammerace@AFMC.AF.Smil.Mil)

During Duty hours (0730-1630) contact Hammer ACE directly at:

DSN: 472-5785, or commercial (478) 222-5785

Emergency Support & after duty hours: Contact Robins Command Post:

DSN: 497-2612 or Commercial (478) 327-2612