

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



**AIR FORCE MANUAL 99-151**

**14 AUGUST 2019**

***Test and Evaluation***

**AIR LAUNCHED MUNITION  
ANALYSIS GROUP (ALMAG)**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This publication implements Air Force Policy Directive (AFPD) 99-1, Test and Evaluation. It establishes procedures, guidance and responsibilities for using the Air Launched Mmunition Analysis Group (ALMAG) to investigate air-launched guided munition, missile, and unmanned full/sub-scale aerial target mishaps and incidents in which drone peculiar equipment (DPE) is suspected as the mishap cause, and occur either during major developmental test (DT), operational test (OT), or in major command (MAJCOM)-conducted testing like force development evaluations (FDE), weapon system evaluation program (WSEP). This manual applies only to units and organizations, including Air Force Reserve, Air National Guard and combat air forces (CAF), who are involved in the testing of guided weapons or use of aerial targets. This manual is not applicable if the convening authority (CA) mandates a safety investigation in accordance with Air Force Instruction (AFI) 91-204, Safety Investigations and Reports, and AFMAN 91-221, Weapons Safety Investigations and Reports. This publication may be supplemented at any level, but all supplements must be routed to the OPR of this publication for coordination prior to certification and approval. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route AF Form 847 from the field through the appropriate functional chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of IAW the

Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

### ***SUMMARY OF CHANGES***

This publication has been changed to an Air Force Manual to implement the ALMAG. Changes to this manual include enhanced readability as a result of changes in the organization of the document, more defined roles and responsibilities, improved grammar and clearer content for the reader.

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## Chapter 1

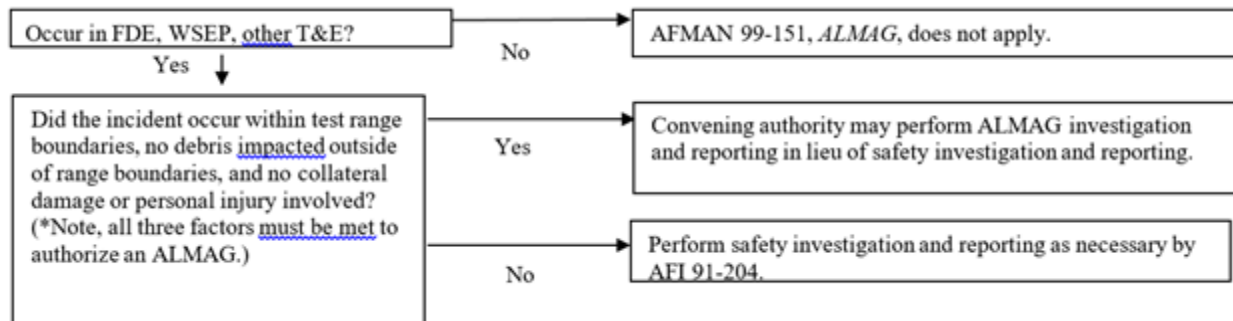
### GENERAL AND PROCEDURES

**1.1. Overview/General.** The Air Launched Munition Analysis Group (ALMAG) is a mechanism for performing timely and thorough failure analysis and investigations in lieu of a formal safety investigation for incidents taking place during FDE, WSEP or other Test and Evaluation. It is an ad hoc group convened by the appropriate test center commander or when directed by the appropriate MAJCOM authority. The requirement for convening an ALMAG is dependent on the circumstances of each particular in-flight mishap or incident. The convening authority will determine if an ALMAG is appropriate according to [Figure 1.1](#), ALMAG Decision Tree, and based on the advice of the lead test wing. (T-1). Generally, an ALMAG investigation will be convened when a safety investigation would otherwise be required, but the mishap occurred within test range boundaries, no debris impacted outside of range boundaries, and no collateral damage or personal injury was involved. The ALMAG determines system deficiencies and report results. ALMAG investigation procedures are authorized in AFI 91-204 (Paragraph 1.4.2.4), and AFMAN 91-221 (Paragraph 5.4), and will be handled in accordance with this AFMAN. However, the report class will be determined in accordance with AFI 91-204 classification guidance for the direct cost of the loss incurred. The scope of ALMAG investigation and reporting is expanded to include mishaps with all guided munitions, missiles, and unmanned full/sub-scale aerial targets in which drone peculiar equipment (DPE) is suspected. For unmanned Full Scale Aerial Targets (FSATs), the interim safety board will conduct a preliminary review of telemetry and/or control system data from the Gulf Range Drone Control System (GRDCS) or the Drone Formation Control System (DFCS), and if the data indicates the event was related to target specific systems or drone modifications, the mishap may be investigated according to this manual. See [paragraph 3.4.2](#) of this manual for additional requirements. In all other cases, the mishap is investigated per AFI 91-204. Additionally, at the convening authority's (CA) discretion, ALMAG investigation and reporting may be used for other incidents not classified as mishaps. This manual does not apply to surface-launched munitions, or missiles, or to science and technology programs or projects, which are managed in accordance with AFI 61-101, *Management of Science and Technology* (S&T). Should an S&T activity experience a test incident where ALMAG involvement would be well-advised, the relevant parties will negotiate such involvement as appropriate. The ALMAG will conduct appropriate investigations to determine the cause(s) of failure. (T-1). ALMAGs are not conducted under the umbrella of privileged safety information, and none of the information gained from an ALMAG is covered by any legal privilege or promise of confidentiality.

### 1.2. Compliance Items.

1.2.1. The Commander, Air Force Operational Test and Evaluation Center (AFOTEC/CC) is delegated waiver authority for all compliance items within this AFMAN, with concurrence of the Directorate for Test and Evaluation, Headquarters United States Air Force (HQ USAF/TE).

1.2.2. IAW AFI 63-101\_20-101, *Integrated Life Cycle Management*, mandates to the acquisition execution chain are not considered Wing-level mandates and, therefore, tiering is not required.

**Figure 1.1. ALMAG Decision Tree.**

## Chapter 2

### ROLES AND RESPONSIBILITIES

**2.1. Headquarters, U.S. Air Force, Director of Test and Evaluation (AF/TE ), through the Policy, Programs and Resources Division (HQ USAF/TEP) will:**

- 2.1.1. Manage policy for the ALMAG program and ensure currency.
- 2.1.2. Respond to and, if required for non-safety issues, mediate ALMAG issues between HQ USAF principals, MAJCOMs, Air Force testers, and impacted program offices.

**2.2. Headquarters, U.S. Air Force, Chief of Safety (AF/SE ), through the Air Force Safety Center (AFSEC) will:**

- 2.2.1. Advise safety policy for the ALMAG program and ensure currency.
- 2.2.2. Respond to and, if required for safety specific issues, take lead in mediating ALMAG issues between HQ USAF principals, MAJCOMs, Air Force testers, and impacted program offices.

**2.3. Headquarters, Air Force Materiel Command (AFMC), through the Safety Office (AFMC/SE), Air Force Life Cycle Management Center, Armament Directorate and Aerial Targets Branch (AFLCMC/EBYA) will:**

- 2.3.1. Oversee implementation of ALMAG policy and direction within the command, including required on-call support for weapon and aerial target program offices to provide specialists and travel funding for ALMAG participation IAW [paragraph 3.4.3. \(T-1\)](#).
- 2.3.2. Advise Air Force Materiel Command Staff Judge Advocate (AFMC/JA) and other offices on safety related issues during ALMAGs in the event the circumstances of the incident trigger a required Accident Investigation Board (AIB) or other form of legal investigation pursuant to DoDI 6055.07, *Mishap Notification, Investigation, Reporting, and Record Keeping*, and/or AFI 51-307, *Aerospace and Ground Accident Investigations*, or if the MAJCOM CC/CD may want to convene a discretionary legal investigation (see **A1, Terms**) pursuant to the aforementioned Instructions. **(T-2)**.
- 2.3.3. Convene, through the lead test center commander, an ALMAG when required. (T-1). The convening authority may be delegated down to the lead test wing commander. The convening authority will appoint the ALMAG chairperson in writing within 24 hours after the mishap is discovered or verified. (T-1). Notify MAJCOM/SE when the decision is made to convene an ALMAG.

**2.4. Headquarters, Air Combat Command (ACC):**

- 2.4.1. Through the Director of Plans, Programs and Requirements (HQ ACC/A5/8/9), Test and Training Division (HQ ACC/A5T) will:
  - 2.4.1.1. Coordinate ALMAG resource requests within and outside ACC. **(T-2)**.
  - 2.4.1.2. Act as the HQ ACC/A5/8/9 single point for receipt of ALMAG specialist requests and oversight of ALMAG messages. **(T-2)**.
  - 2.4.1.3. Serve as HQ ACC POC for ALMAG program. **(T-2)**.

2.4.2. Through the Flight Operations Division (HQ ACC/A3T) act as OPR for CAF Plan 53 implementation of ALMAG program.

2.4.3. Through the Director of Safety (HQ ACC/SE), Office of Weapons Safety (ACC/SEW) will:

2.4.3.1. Advise ACC/JA and other offices on safety related issues during ALMAGs in the event that the circumstances of the incident trigger a required AIB or other form of legal investigation pursuant to DoDI 6055.07 and/or AFI 51-307, or if the MAJCOM CC/CD want to convene a discretionary legal investigation (see **A1, Terms**) pursuant to the aforementioned Instructions. **(T-2)**.

2.4.3.2. Coordinate ALMAG resource requests within and outside ACC. **(T-2)**.

2.4.3.3. Act as the HQ ACC/SE single point for receipt of ALMAG messages. **(T-2)**.

2.4.4. Through the Test Centers, unless directed otherwise, United States Air Force Warfare Center (USAFWC) and Air National Guard/Reserve Test Center (AATC) will:

2.4.4.1. Implement the ALMAG program and resource accordingly, including specialists. **(T-2)**.

2.4.4.2. Convene an ALMAG when required. (T-1). The convening authority may be delegated down to the lead test wing commander. The convening authority will appoint the ALMAG chairperson in writing within 24 hours after the mishap is discovered or verified. (T-1). Notify MAJCOM/SE when the decision is made to convene an ALMAG.

2.4.5. Through the 53 Wing and its subordinate unit, the 53 Weapons Evaluation Group (WEG), will execute the ALMAG program on behalf of the test programs, manage and provide funding and specialists IAW this manual. **(T-2)**.

## **2.5. Headquarters, Air Force Global Strike Command (AFGSC):**

2.5.1. Through the Flight Operations Division (HQ AFGSC/A3T), will act as OPR for AFGSC/CC Plan 001 Nuclear Weapon Systems Evaluation Program (NucWSEP/COMBAT SLEDGEHAMMER) implementation of ALMAG program.

2.5.2. Through the Director of Safety (HQ AFGSC/SE) will:

2.5.2.1. Advise AFGSC/JA and other offices on safety related issues during ALMAGs in the event the circumstances of the incident trigger a required AIB or other form of legal investigation pursuant to DoDI 6055.07 and/or AFI 51-307, or if the MAJCOM CC/CD may want to convene a discretionary legal investigation (see **A1, Terms**) pursuant to the aforementioned Instructions. **(T-2)**.

2.5.2.2. Coordinate ALMAG resource requests within and outside AFGSC. **(T-2)**.

2.5.2.3. Act as the HQ AFGSC/SE single point for receipt of ALMAG messages. **(T-2)**.

2.5.3. Through the lead test center commander convene an ALMAG when required. (T-1). The convening authority may be delegated down to the lead test wing commander. The convening authority will appoint the ALMAG chairperson in writing within 24 hours after the mishap is discovered or verified. (T-1). Notify MAJCOM/SE when the decision is made to convene an ALMAG.

**2.6. Air Force Operational Test and Evaluation Center (AFOTEC) will support ALMAG requests for specialists as outlined in this manual and understand impacts to test missions.**

**2.7. Program Managers (PM).** The PM (or designated safety representative) will:

2.7.1. Support ALMAG requests for specialists.

2.7.2. Provide specialist roster to HQ ACC/A5T for ALMAG call-forward.



## Chapter 3

### ALMAG MEMBERSHIP AND RESPONSIBILITIES

**3.1. ALMAG Membership.** Each ALMAG is composed of experts chosen by the ALMAG chairperson to conduct each specific investigation. Exact ALMAG membership is determined on a case-by-case basis. ALMAG membership ends upon completion of each investigation. Each MAJCOM, via their respective wings/units, funds TDY of its assigned personnel who are ALMAG members or technical experts. Contractors normally travel via their own funding.

**3.2. ALMAG Convening Authority.** The lead test center commander will convene an ALMAG when required. (T-1). The convening authority may be delegated down to the lead test wing commander. The convening authority will appoint the ALMAG chairperson in writing within 24 hours after the mishap is discovered or verified. (T-1). Notify MAJCOM/SE when the decision is made to convene an ALMAG.

**3.3. ALMAG Chairperson.** The chairperson must be a major or above, or the civilian equivalent, whose selection is based on experience, expertise, maturity, and impartiality. In certain cases, the chairperson should be chosen from an outside organization to ensure a more independent investigation is accomplished. The ALMAG chairperson will:

- 3.3.1. Nominate members from critical support agencies and functional areas to serve on the ALMAG.
- 3.3.2. Add technical experts and supplemental members to the ALMAG as needed for the particular investigation.
- 3.3.3. Advise the convening authority of the final ALMAG membership, and provide an estimated time frame for completing the investigation.
- 3.3.4. Convene and chair the ALMAG.
- 3.3.5. Assume all responsibilities for successful conduct of the ALMAG.
- 3.3.6. Arrange for facilities, transportation, communications, equipment, and other support for the investigation.
- 3.3.7. Secure all test data and technical information for the investigation.
- 3.3.8. Coordinate through the FDE point of contact (POC) in obtaining any additional or outside technical expertise.
- 3.3.9. Submit reports and briefings as described in [Chapter 4](#) of this manual.
- 3.3.10. Submit an extension waiver request to the convening authority, and provide an information copy to the Air Force Safety Center (AFSEC)/Vice Commander (CV), if sufficient data is not available to allow for the investigation and report to be completed as needed (i.e., within 90 days).
- 3.3.11. Disband the ALMAG after all analysis and recommendations for further investigations or fixes, if any, have been reported. Convening authority will concur on all analysis and recommendations prior to disbanding. (T-1).

**3.4. Primary ALMAG Members.** The following specialists will normally be present on each ALMAG convened:

3.4.1. Operations, Analytical, Engineering, or Maintenance Specialists. The munition/full-/sub-scale aerial target launch unit, MAJCOM, and the weapon system program manager provide government representative(s) who are operations, analytical, engineering, and maintenance expert(s) as needed by the ALMAG chairperson. These personnel should be drawn from system program offices and system item manager offices, test and evaluation organizations, analytical agencies, and operational organizations. Other fields or disciplines may be selected for the ALMAG as needed.

3.4.2. Safety Specialist. A qualified flight safety officer or weapons safety non-commissioned officer or civilian equivalent should be selected for the ALMAG as needed. The safety specialist advises the ALMAG chairperson on safety issues and guidelines according to AFI 91-204 after the ALMAG is convened, and will advise the adjournment of the ALMAG if the incident falls under the purview of the 91-series safety instructions.

3.4.3. Appropriate Air Force Materiel Command (AFMC) Specialists. Government specialists from AFMC are selected for the ALMAG as needed. These specialists will:

3.4.3.1. Provide the ALMAG with technical and historical data about the system under investigation.

3.4.3.2. Arrange for or acquire technical data or laboratory analysis from the system contractor.

3.4.4. Test POC. The test center's POC responsible for the overall management of the specific weapon system evaluation will:

3.4.4.1. Coordinate the tasking of other USAF agencies, functional areas, military services, or contractors for technical support, as needed, at the direction of the ALMAG chairperson.

3.4.4.2. Ensure all relevant test and instrumentation data is made available to the ALMAG.

3.4.4.3. Advise the ALMAG about all FDE and test matters.

3.4.5. MAJCOM Representative. The MAJCOM representative will provide any coordination required between the ALMAG and the MAJCOM headquarters.

**3.5. Optional ALMAG Members.** The following optional experts should be considered for ALMAG participation as needed:

3.5.1. Operations expert(s).

3.5.2. Weapon or aircraft maintenance expert(s).

3.5.3. Weapons or aircraft safety expert(s).

3.5.4. Continental United States (CONUS) test range safety expert(s).

3.5.5. Non-CONUS test range representative(s).

3.5.6. Test instrumentation expert(s).

3.5.7. Recovery specialist(s).

3.5.8. Mission software expert(s).

3.5.9. Mission planning expert(s).

3.5.10. System contractor engineering specialist(s) for the weapon system being investigated.

## Chapter 4

### ALMAG PROCEDURES

**4.1. Convening the ALMAG.** If an ALMAG is appropriate (see Paragraph 1.3), the convening authority appoints an ALMAG chairperson in writing. If any conflicts of interest are identified, the convening authority should appoint an ALMAG chairperson from outside the test wing.

**4.2. Reporting Requirements.** All ALMAG members will participate in preparing required reports and messages to ensure clarity and technical accuracy. All reports are restricted to agencies on a "need to know" basis. The ALMAG chairperson will be the approval authority for all reports and messages which are submitted according to the following guidelines:

4.2.1. Message Reports. The term message in this manual is defined to include e-mail or appropriate electronic transmittal medium, vice legacy Air Force messaging systems. For standardization, see [Attachment 2, Reporting Formats](#), for recommended ALMAG message report formats.

4.2.1.1. Preliminary Message. A preliminary message is sent to the addressees identified in [Figure A2.1](#) within 24 hours. Format preliminary message IAW [A2.1](#), providing purely factual information only.

4.2.1.2. Progress Report Message. Provide periodic progress reports by message to the convening authority on the investigation's status as additional information becomes available, or no later than 30 days following the incident. Provide information copies to the test POC and addressees in [Figure A2.2](#).

4.2.1.3. Final Report Message. A final report message is sent no later than 90 days after the convening of the ALMAG, unless an extension has been requested and approved.

4.2.2. Final Report Briefing. A final report briefing to the ALMAG convening authority summarizes the information in the final report message. The convening authority may waive the briefing when appropriate. The convening authority has responsibility to archive the final report.

4.2.3. Written Formal Report. If directed by the convening authority, the ALMAG chairperson will submit a written formal report documenting evidence, engineering analysis, and findings to the addresses listed in [Figure A2.2](#). For the formal report format, use AFMAN 91-221, **paragraphs 6.9 through 6.14** as a guide, but tailor the tabs as appropriate. No items in the ALMAG formal report **will contain privileged safety information**. As a minimum, the formal report covers findings, causes, a summary of the engineering analysis, and recommended corrective actions. If sufficient data is not available to complete the investigation and formal report within 90 days, the ALMAG chairperson will request an extension from the convening authority. The convening authority has the responsibility to archive the final report.

4.2.4. Transfer of Evidence to Legal Investigation. In the event an AIB or other form of legal investigation convenes after the ALMAG, the ALMAG chairperson or designee will transfer the non-privileged evidence to the legal advisor (of the AIB or other type of legal investigation), IAW AFI 51-307 or as otherwise directed by the appropriate MAJCOM/JA representative.

DEVIN L. CATE, SES  
Director, Test and Evaluation

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

AFPD 99-1, *Test and Evaluation Process*, 20 June 2018

AFI 16-1404, *Air Force Information Security Program*, 29 May 2015

AFI 61-101, *Management of Science and Technology*, 14 March 2013

AFI 91-204, *Safety Investigations and Reports*, 27 April 2018

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

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

AFMAN 33-363, *Management of Records*, 1 March 2008

AFI 63-101\_20-101, *Integrated Life Cycle Management*, 9 May 2017

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

AFI 51-307, *Aerospace and Ground Accident Investigations*, 18 March 2019

CAF Plan 53, *COMBAT Weapon System Evaluation Program (WSEP)*, 1 Aug 2019

**NOTE:** The user of this manual is responsible for verifying the currency of the cited documents.

***Prescribed Forms***

No forms are prescribed by this publication

***Adopted Forms***

AF Form 847, *Recommendation for Change of Publication*

***Abbreviations and Acronyms***

**ACC**—Air Combat Command

**AFGSC**—Air Force Global Strike Command

**AFI**—Air Force Instruction

**AFMAN**—Air Force Manual

**AFSEC**—Air Force Safety Center

**AFMC**—Air Force Materiel Command

**AFRC**—Air Force Reserve Command

**AIB**—Accident Investigation Board

**ALMAG**—Air-Launched Missile Analysis Group

**ANG**—Air National Guard

**CA**—Convening Authority

**CAF**—Combat Air Forces

**CONUS**—Continental United States

**DoD**—Department of Defense

**DPE**—Drone Peculiar Equipment

**FDE**—Force Development Evaluation

**HQ**—Headquarters

**IAW**—In Accordance With

**MAJCOM**—Major Command

**PACAF**—Pacific Air Forces

**POC**—Point of Contact

**S&T**—Science and Technology

**T&E**—Test and Evaluation

**USAFE**—United States Air Forces in Europe

### ***Terms***

**Combat Air Forces (CAF)**—A group of MAJCOMs comprised of ACC, AFGSC, ANG, AFRC, USAFE, and PACAF.

**CAF Plan 53**—, **COMBAT Weapon System Evaluation Program (WSEP)**—A plan, managed by ACC's 53 WG, that evaluates full spectrum combat capability in order to ensure air and space superiority versus near-peer adversaries. In order to do so all combat evaluation programs, ARCHER, HAMMER, SHIELD, SLEDGEHAMMER, MACE and FORGE will be consolidated under a single "COMBAT WSEP" umbrella. COMBAT ARCHER evaluates air-to-air weapon systems; COMBAT HAMMER evaluates air-to-ground weapon systems; COMBAT SHIELD assesses the combat readiness of specified electronic warfare equipment/infrared countermeasures; COMBAT SLEDGEHAMMER evaluates the full spectrum of strategic bomber and tactical fighter air-delivered nuclear-tasked operational weapon systems; COMBAT MACE quantifies space weapon system effects for key stakeholders; and COMBAT FORGE evaluates the concurrency, fidelity, and interoperability of the CAF's Aircrew Training Devices.

**Convening Authority (CA)**—IAW AFI91-204, *Safety Investigations and Reports*, the individual who has the authority to order a safety investigation.

**Discretionary Legal Investigation**—While this AFMAN indicates that ALMAGs are for specific types of incidents/mishaps and generally not incidents/mishaps investigated by Safety Investigation Boards (SIBs), some of these incidents/mishaps may still require an Accident Investigation Board (AIB) or other DoDI legal investigation. Also, depending on the circumstances, the MAJCOM may want to exercise its discretion to convene a legal investigation, even if one is not required. AIBs are convened at the MAJCOM Commander/Deputy Commander level, and the information about mishaps normally flows from the MAJCOM Safety Office (SE) to the MAJCOM Command Counsel (JA). Since the MAJCOM/SE will likely have situational awareness of the mishap being investigated through the ALMAG, and some of these incidents could still be investigated through a SIB, it is appropriate to follow the same normal process at the

MAJCOM that already exists for SIB-AIB transfer of information. MAJCOM/JAs use and need this information to advise Convening Authorities about the appropriateness or requirements of follow-on legal investigations.

**Drone Peculiar Equipment (DPE)**—DPE consists of the necessary modifications and adding of equipment by a contractor to a retired military aircraft to allow it to be controlled remotely and operate as a target in an unmanned configuration that supports the employment of live weapons against it. DPE includes telemetry uplink and downlink target control systems, necessary modifications to flight/engine controls, landing gear and braking/steering systems to allow unmanned operation, auto-takeoff and landing systems, auto-throttle, visual augmentation systems, vector scoring, flight termination system, remote payload operation and release.

**Force Development Evaluation (FDE)**—A type of operational test and evaluation (OT&E) performed by MAJCOM Operational Test Organizations (OTOs) in support of MAJCOM-managed system acquisition-related decisions prior to initial fielding, or for MAJCOM sustainment or upgrade activities.

**MAJCOM Representative**—A member of the ALMAG appointed by the MAJCOM division chief that is the staff point of contact for the system involved in the mishap. The MAJCOM representative is normally the system's MAJCOM program element monitor.

**Mishap**—An unplanned occurrence, or series of occurrences, that results in damage or injury and meets Class A, B, C, or D mishap reporting criteria according to AFI 91-204, **paragraph 1.8**. Damage or injury includes: damage to DOD property; occupational illness to DOD military or civilian personnel; injury to DOD military personnel on- or off-duty; injury to on-duty DOD civilian personnel; damage to public or private property, or injury or illness to non-DOD personnel caused by Air Force operations.

**Test Incident**—An unplanned occurrence, or series of occurrences, that is not classified as a safety mishap (see above), but results in damage to test systems or loss of test data at an unplanned time for unanticipated reasons resulting in the inability to meet test objectives.



## Attachment 2

## REPORTING FORMATS

**A2.1. Format for Preliminary Message Reports.** Originators of preliminary message reports will use the report format in [Figure A2.1](#) for reporting guided munition, missile, and unmanned full/sub-scale aerial target mishaps where DPE is suspected within 8 hours, but not later than 24 hours after the incident according to [paragraph 4.2.1.1](#). (T-1).

**Figure A2.1. Format for Preliminary Message Reports.**

FROM: Originator.

TO: Mandatory addressees include HQ AFSEC, HQ AFGSC/SE/A3T/A5B, HQ ACC/SE/A5/A3, HQ PACAF/SE, HQ AFMC/A3, HQ USAFE/SE, HQ ANG/XOSW, HQ AFRC/SE, and HQ ACC/A5T, AFOTEC/SE, 53WG/SE. For unmanned full/sub-scale targets, add HQ ACC/AMIC. Include appropriate addressees from AFMAN 91-221, **Table 6.3**.

CLASSIFICATION: Use the proper security markings prescribed by AFI 16-1404, *Air Force Information Security Program*, for classified messages.

SUBJECT: Report type, system type and mishap event date (e.g., Preliminary, ALMAG, AGM-86, 20121231)

Special Markings, if applicable (e.g., FOR OFFICIAL USE ONLY).

**NOTE:** For classified messages, omit the quotation “FOR OFFICIAL USE ONLY.”

1. Nomenclature and name, weapon carrier mission-design-series (MDS), serial number, building number and purpose, national stock number, part number, manufacturer’s name, as applicable.
2. Date (DD MMM YYYY), time (HHMM), and weather conditions (if pertinent) of mishap (e.g., 03 MAR 2016/1900/FOGGY, NIGHT).
3. Clear text name of base submitting report.
4. Location of the mishap. If on a military installation, give the name of the installation, specific location on base, and general function of the location or facility. If the event occurred on the range, use street and highway references as well as the distance and compass direction from the nearest US military installation. Global Positioning System (GPS) coordinates (DDD-MM.MM) may be used in place of street and highway references for remote locations.
5. Owning MAJCOM, Numbered Air Force (NAF), Center/Wing (wing-equivalent Groups), and Squadron/Unit.

6. NARRATIVE. Give brief description of mishap. Provide strictly abbreviated, factual information. Do not include information implying cause or containing material gained through testimony from crewmembers or other witnesses. Describe extent of damage (e.g., "MISSILE DESTROYED"). Include mission information.

7. ADDITIONAL DETAILS. Include an initial cost estimate, status of on-going recovery operations, hazard containment and security, and information on the level of media interest.

8. Interim cognizant official, telephone numbers (DSN and commercial), and e-mail address.

**NOTE:** Ensure latest organizational e-mail addresses as populated in the Global Address List (GAL) are updated and used.

**A2.2. Format for Progress and Final Message Reports.** Originators of Progress and Final message reports will use the message report format in [Figure A2.2](#) for reporting guided munition, missile, and unmanned full/sub-scale aerial target mishaps where DPE is suspected according to [paragraphs 4.2.1.2](#) and [4.2.1.3](#) (T-1).

**Figure A2.2. Format for Message Reports.**

FROM: Originator.

TO: Mandatory addressees include HQ AFSEC, HQ ACC/SE/A5/A3, HQ AFGSC/SE/A3T/A5B, HQ PACAF/SE, HQ AFMC/A3, HQ USAFE/SE, HQ ANG/XOSW, HQ AFRC/SE, HQ ACC/A5T, and AFOTEC/SE. For unmanned full/sub-scale aerial targets, add HQ ACC/AMIC. Include appropriate addressees from AFMAN 91-221, **Table 6.3**.  
 CLASSIFICATION: Use the proper security markings prescribed by AFI 16-404 for classified messages.

SUBJECT: Report type, system type and mishap event date (e.g., Preliminary, ALMAG, AGM-86, 20121231)

Special Markings, if applicable (e.g., FOR OFFICIAL USE ONLY).

**NOTE:** For classified messages, omit the quotation “FOR OFFICIAL USE ONLY.”

1. LOCATION OF MISHAP:

1.1. Name of base or military property (such as Utah Test and Training Range) on which mishap occurred.

1.2. State and country of mishap.

1.3. Location of the mishap. If on a military installation, give the name of the installation, specific location on base, and general function of the location or facility. If the event occurred on the range, use street and highway references as well as the distance and compass direction from the nearest US military installation. Global Positioning System (GPS) coordinates (DDD-MM.MM) may be used in place of street and highway references for remote locations.

1.4. Date (DD MMM YYYY) of mishap (e.g., 3 MAR 2016).

1.5. Local time (HHMM) of mishap (e.g., 1900).

2. Owning MAJCOM, Numbered Air Force (NAF), Center/Wing (wing-equivalent Groups), and Squadron/Unit.

3. Environmental factors:

3.1. If weather was a factor, describe pertinent conditions. Otherwise state, “WEATHER WAS NOT A FACTOR.”

3.2. Day or night.

3.3. If the mishap involved fire or explosion, describe pertinent details. Otherwise state, “NO EXPLOSION OR FIRE.”

4. Damage and cost estimates:

4.1. Mishap cost NON-AF: Estimate of damage to non-Air Force property, including other DOD and non-DOD property.

4.2. Air Force cost damage: Cost of damage to Air Force property, including labor and material.

4.3. Total mishap cost (sum of costs in items 4.1. and 4.2.).

5. PROPERTY DATA.

5.X.1. Item name. Give the following data on each piece of property (munition or other equipment) involved. Number as 5.1.1 through 5.X.8.

5.X.1.1. Vehicle or equipment serial number.

5.X.1.2. Object or vehicle activity at time of mishap.

5.X.1.3. Was object destroyed (Y or N)?

5.X.1.4. Mission-design-series (MDS).

5.X.1.5 Mishap within 10 miles of base (Y or N)?

5.X.1.6. Major system failing.

5.X.1.7. FAILED PART INFORMATION. Repeat entries 5.X.1.7.1 through 5.X.1.7.5 as required for all failed parts. Number as 5.X.1.7.1 through 5.X.1.7.Y.

5.X.1.7.Y. Failed part description.

5.X.1.7.Y.1. Failed part number.

5.X.1.7.Y.2. Failed part manufacturer.

5.X.1.7.Y.3. Mishap event number from deficiency report.

5.X.1.7.Y.4. Lot number (if applicable).

6. NARRATIVE. Give a concise, chronological description of the facts and circumstances leading to the mishap. For areas not factors in the mishap, give details in narrative not included elsewhere in the report. Include enough information in final reports to show investigating officer reasoning in reaching findings and recommendations. In all cases, continue the sequence through point of occurrence (or discovery) for all damage and/or until the end of the mishap. For technical assistance on this item, contact HQ AFSEC/SEW, DSN 246-6059, commercial (505) 846-6059. Specify in the narrative if an accident investigation was or was not convened and is being conducted.

7. FINDINGS AND CAUSES. Repeat entries 7.1 through 7.X for the required number of findings and causes. Findings may not address new information that was not previously discussed in the narrative. Identify and document hazards that played a role in the mishap sequence. Hazards are defined as “any real or potential condition that can cause injury or occupational illness to personnel; damage to or loss of a system, equipment or property; or damage to the environment.” Determine whether individuals or management addressed these hazards during preparation and execution of the mishap sequence. Assess the risk based upon the tables of probability and severity from AFI 91-204.

8. Preventive action(s) recommended or taken. Repeat entries 8.1 through 8.X as necessary.

9. Cognizant official, unit, office symbol, telephone number (DSN and commercial) and e-mail address.